

■

THE ARMY DOCTRINE AND TRAINING BULLETIN

■

Canada's Professional Journal on Army Issues

MANSTEIN'S COUNTERSTROKE 1943

Major S. Kooistra

PROFESSIONALISM UNDER FIRE

CANADIAN IMPLEMENTATION OF THE MEDAK POCKET AGREEMENT, CROATIA 1993

Lee Windsor

FIGHTING IN BUILT-UP AREAS — WE CAN DO THIS, SO LET'S GET ON WITH IT

Brigadier-General Glenn Nordick, MSC, CD

AN IMPRESSIVE AND AMAZING FORCE: THE HOPLITE WARRIOR

Captain Tod Strickland

CANADIAN DOCTRINE: CONTINUITIES AND DISCONTINUITIES

Bill McAndrew, CD, Ph.D

“DIE GEDANKEN SID FREI”:

THE INTELLECTUAL CULTURE OF THE INTERWAR GERMAN ARMY

Professor Rob Citino, Ph.D.

ON DOCTRINE — A BRIEF COMMENT

Lieutenant-Colonel (ret'd) Roman Johann Jarymowycz, OMM, CD, Ph.D.

Vol. 4, No. 3, Fall 2001



National
Defence

Défense
nationale

Published Quarterly



THE ARMY DOCTRINE AND TRAINING BULLETIN

Canada's Professional Journal on Army Issues

This is an official publication of Land Force Command and is published quarterly. The Army Doctrine and Training Bulletin is dedicated to the dissemination and discussion of doctrinal and training concepts, ideas and opinions by all army personnel and those civilians with an interest in doctrinal, training and other military matters. Articles on related subjects such as leadership, ethics, technology and military history are also invited. Considered, reasoned debate is central to the intellectual health of the army and the production of valid doctrine and training policies. Articles promoting thought and discussion are therefore welcome. All ranks and personnel from other environments are encouraged to contribute. 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. All published material remains the copyright of the Department of National Defence and may be used with written permission from the Managing Editor.

ARTICLE GUIDELINES

Articles of any length will be considered for publication, the ideal length being 3000 to 6000 words. Articles can be submitted in either official language. Usage and spelling are in accordance with *The Canadian Style: A Guide to Writing and Editing* (Minister of Supply and Service 1997) and *Le guide du rédacteur de l'administration fédérale* – both are available via www.pwgsc.gc.ca/termium, libraries or bookstores; and *The Concise Oxford Dictionary* or *Le Petit Robert*. Supporting tables, charts and images must be provided by the author and should not be embedded in the text. Articles must include endnotes. Contributors must include a brief biography citing their academic background, noteworthy military or other experience, key courses and current position. Articles can be submitted via e-mail or regular mail (a disc copy must be included). All submissions will be reviewed by an Editorial Board and contributors will be notified by the Managing Editor on the status of their submission. The Managing Editor reserves the right to make minor editorial changes to grammar or style. Authors will be contacted should their submission require revision.

STAND-UP TABLE (COMMENTARY) GUIDELINES

Contributions to the Stand-Up Table should be no longer than 1000 words and can be made anytime. Every effort will be made to publish these in the earliest issue possible. Comments on articles should be submitted as soon as possible following the publication of that article.

DEADLINES

Please contact the Managing Editor to confirm submission deadlines:

Spring Issue: By 15 September
Summer Issue: By 15 December
Fall Issue: By 31 March
Winter Issue: By 30 June

DISTRIBUTION AND ELECTRONIC COPIES

The Bulletin is distributed throughout the Army and to select NDHQ, Maritime Command, Air Command, CFRETS and DISO addresses. Copies are also provided to defence-related organizations, allied armies and members of the public and academia. Inquiries regarding distribution are to be made to the Managing Editor. An electronic version of the Bulletin is available at www.army.dnd.ca/ael/.

CORRESPONDENCE

All contributions and correspondence should be sent to the Managing Editor, Major John R. Grodzinski, as follows:

The Managing Editor
Army Doctrine and Training Bulletin
Land Force Doctrine and Training System
PO Box, 17000 Stn Forces
Kingston ON K7K 7B4

Telephone: (613) 541-5010, extension 4874
Fax: (631) 541-4478
Internet e-mail: mail854g@dnd.ca

EDITING AND LAYOUT

The final editing of each issue is performed by the Army Publishing Office, Land Force Doctrine and Training System, Kingston, Ontario:

English Editors: Lieutenant(N) Brian Lawrie-Munro,
Ms. Sandra Hanisch, Ms. Karen Johnstone,
Mr. Greg Taylor

French and English Editors: Mr. Gilles Langlois,
Mr. Geoffrey Meyer

French Editors: Ms. Thérèse Lessard, Ms. Melissa Martin

Layout and proofreading services are provided by:

CFTMPC  CPMIFC

CF Training Materiel Production Centre
(204) 833-2500, ext. 5356

Table of Contents

GUEST EDITORIAL – TACTICAL AVIATION: TODAY, TOMORROW, AND BEYOND2
<i>Colonel J.M. Duval, Commander 1 Wing</i>	
FROM THE MANAGING EDITOR6
FROM THE DIRECTOR OF ARMY DOCTRINE	
THE THREAT FROM BLAST WEAPONS9
MANSTEIN’S COUNTERSTROKE 194313
<i>Major S. Kooistra</i>	
PROFESSIONALISM UNDER FIRE	
CANADIAN IMPLEMENTATION OF THE MEDAK POCKET AGREEMENT, CROATIA 1993 . .	.20
<i>Lee Windsor</i>	
FIGHTING IN BUILT-UP AREAS — WE CAN DO THIS, SO LET’S GET ON WITH IT28
<i>Brigadier-General Glenn Nordick, MSC, CD</i>	
AN IMPRESSIVE AND AMAZING FORCE: THE HOPLITE WARRIOR33
<i>Captain Tod Strickland</i>	
CANADIAN DOCTRINE: CONTINUITIES AND DISCONTINUITIES41
<i>Bill McAndrew, CD, Ph.D.</i>	
“DIE GEDANKEN SIND FREI”:	
THE INTELLECTUAL CULTURE OF THE INTERWAR GERMAN ARMY48
<i>Professor Rob Citino, Ph.D.</i>	
ON DOCTRINE — A BRIEF COMMENT56
<i>Lieutenant-Colonel (ret’d) Roman Johann Jarymowycz, OMM, CD, Ph.D.</i>	
THE STAND-UP TABLE66

Part of Our Heritage

Early European Soldiers in Newfoundland



A Viking warrior at L'Anse aux Meadows, Newfoundland, c. 1000. Attacks by Natives and disease may have forced their departure—almost 500 years would pass before Europeans tried to colonize the New World again. (Courtesy National Geographic Society)



Sergeant of the *Compagnies franches de la Marine* of Acadia and Plaisance between 1701 and 1713. (Courtesy Parks Canada)



A Soldier from Gibbon's Regiment in Newfoundland, c. 1697-98, the first regular British regiment to serve in Canada. (Courtesy Parks Canada)



Artilleryman of the Board of Ordnance detachment which garrisoned the British forts in Newfoundland between 1700 and 1716. (Courtesy DHH)

The 2001 Army Doctrine and Training Bulletin Warfighting Essay Competition

Two prizes will be awarded for the two best papers.

FIRST PRIZE: \$250.00 cash

SECOND PRIZE: A \$100.00 Certificate from Vanwell Publications,
Canada's Largest Supplier of Military Titles

This competition is open to all Army personnel serving throughout the Canadian Forces. Essays should be persuasive discussions of tactics, doctrine, training, force structure, combat development, operations, history or other issues related to the Land Force.

Entry Rules: Essays must be original and not previously submitted or published elsewhere. Entries must be between 2000 and 4000 words in length. Submissions must include one double-spaced printed copy and an IBM-compatible disc copy. A *nom de guerre* must be substituted for the author's name on the title page. The author's actual name, contact information and a brief biography (academic background, key courses and employment, current position) must be provided in a sealed envelope with the *nom de guerre* clearly shown on the outside of the envelope.

Judging: All submissions will be reviewed by a panel consisting of the Commandant Canadian Land Force Command and Staff College, representatives from the Directorate of Army Doctrine and the Directorate of Army Training, and an academic member of The Royal Military College of Canada, with the Managing Editor as Secretary. Winners will be announced in January 2002 and will be published in the Spring 2002 issue of the *Army Doctrine and Training Bulletin*.

Deadline: Entries must be postmarked on or before 31 December 2001.

For further information or to submit entries contact:

Major John R. Grodzinski
Managing Editor
The Army Doctrine and Training Bulletin
P.O. Box 17000 Stn Forces
Kingston ON K7K 7B4

Telephone: (613) 541-5010, local 4874

E-mail: mail854g@dnd.ca

The Army Doctrine and Training Bulletin *acknowledges the support of Vanwell Publications in making this competition possible and its continued assistance in Bulletin-sponsored activities.*

Guest Editorial

Tactical Aviation: Today, Tomorrow, and Beyond

by Colonel J.M. Duval, Commander 1 Wing

Analysis of the evolving security environment has led Canadian Forces (CF) leadership to place a premium on technologies able to deliver in the areas of command and control (C2), intelligence, surveillance and reconnaissance (ISR), mobility, and force protection. This is clearly laid out by the Canadian Joint Task List (CJTL) and associated matrix, which figure so prominently in current strategic planning efforts, as well as other visionary guidance that serves to direct the search for required future operational capabilities. Defining the probable future has been a key activity in developing these areas of focus. Just as the impending revolution in military affairs (RMA) and Strategic Vision 2020 have presaged a new future for both the army and the air force, the future of tactical aviation will be shaped in parallel.

To support this evolution with credible interim tactical aviation capabilities, the army, the air force, and indeed the CF must move past the time of looking upon today's CH-146 Griffon as a utility transport helicopter in the classical sense and into an era of exploiting the aircraft as a multipurpose platform capable of satisfying a myriad of impending army, air force, CF, and national capability requirements. Such potential capabilities are the harbingers of where we want tactical aviation to be 20 years from now and form the foundation of our eventual transition to that longer-term visionary force structure. Today's growing technical ability to easily integrate fused sensor information with the effects of advanced precision weaponry in a multipurpose aircraft has significantly mitigated the former platform-centric approach to tactical aviation, and the CH-146 is well postured to be exploited in this regard.

Admittedly, the implementation of the CH-146 was not without some baggage, yet the Griffon has come to

define the character and potential future impact of tactical aviation. It is the primary tool at our disposal as we continue to transition from the "land" aviation support arm of some three decades past to the "tactical" aviation capability that contains so much promise for the future. Once it became possible to assess this aircraft outside the shadow of those venerable fleets that preceded it, the reality of its present and future employment potential became much easier to perceive. It can be said with conviction that the news is good. It has been easy in many circles to question the full utility of the CH-146 in terms of its ability to fulfill the many roles originally envisioned for the Canadian Forces Utility Tactical Transport Helicopter (CFUTTH). Today's focus has rightfully shifted from what the aircraft cannot do and was never meant to do (most notably in the area of lift) to what it can do and has the potential to do very well as we strive to provide for the army's hard tactical aviation doctrinal requirements.

In addition to renewed emphasis on the reconnaissance role with the advent of the electro-optical reconnaissance, surveillance, and target acquisition (ERSTA) system, new roles are being considered for the aircraft, particularly in the areas of armed reconnaissance and direct firepower, which were not being contemplated even three short years ago. This reflects a clear desire to leverage tactical aviation technologies in the Army of Tomorrow, including expanded roles that address areas of risk in the proposed army structure, as well as new capabilities well suited to the expected security environment. In this regard, the current airframe, coupled with the doctrinal concept of blending—basing desired tactical aviation capabilities on a single, multipurpose platform instead of

dedicated aircraft types—has left 1 Wing in an excellent position to meet the challenges that lay ahead. By careful exploitation of the untapped potential of both the basic aircraft and future strap-on capabilities that we may elect to develop and pursue in response to operational deficiencies, we can maximize the Griffon's employability in a number of new and traditional roles and in support of key areas of both the air force and the army force structures. There are obviously inherent limitations, but there is also every reason to believe that this aircraft, properly equipped, can participate in operations throughout the spectrum of conflict, while not necessarily being able to conduct all of the associated tasks. This satisfactory trade-off is in consonance with higher-level vision and guidance. It is also a realistic evolutionary step for tactical aviation, a step that supports eventual achievement of third planning horizon tactical aviation capabilities. Let there be no doubt that Griffon-based tactical aviation holds significant promise as an army force multiplier into the foreseeable future.

In addition, the ability of the Griffon to leverage an existing platform in order to make progress against several deficient areas in the CJTL matrix is quite evident. ERSTA, for example, will not only provide an information and intelligence gathering capability relevant to all levels but in so doing will enhance aspects of higher C2 as well. Further enhancement or creation of new tactical aviation capabilities can, in most cases, be attended to through the addition of modular equipment that compliments and exploits the newer, close to world standard, basic aircraft platform represented by the CH-146. In most cases, the targeted technologies are those that are multipurpose in terms of their

applicability to a broad range of tactical aviation customers. By and large, they are also available as commercial or military off-the-shelf (COTS/MOTS) technologies. As always, a philosophy of planning for war and adapting to peace support will ensure that the forces generated are not only combat-capable but also represent value and flexibility.

The evolution from “land” to “tactical” aviation that has occurred over the last 15 years is a reflection of tactical aviation’s increased relevance to a broader range of customers. Unfortunately, notwithstanding the continued primacy of the army as our “number one” customer and *raison d’être*, this evolution has taken place to a large extent at the expense of tactical aviation’s relevance to the army. There now exists a generation of army officers whose awareness and understanding of tactical aviation has been tainted by a lack of opportunities to work with this important force multiplier in the all-arms arena. Much of this lost relevance can be attributed to the turmoil associated with the implementation of the new aircraft. It has been compounded by increasingly broad demands on tactical aviation resources and a contemporaneous period of resource reduction across the air force. The reality is that the maintenance and enhancement of tactical aviation’s war fighting capabilities remain inextricably linked to the ability and need to support the army. As these war-fighting capabilities are maintained and enhanced, a corollary dynamic is foreseen within the army, whereby it will be increasingly reluctant to deploy without its tactical aviation component.

The means of addressing this issue are varied. Those means include the continued fielding and maximized employment of ERSTA to satisfy the tactical aviation *recce* and ISTAR (intelligence, surveillance, target acquisition, and reconnaissance) requirements of the Land Force. They embrace a renewed focus on appropriate liaison at all levels. They also comprise a concerted effort to

maximize the level of support we make available to the army including, to the extent possible, the exploitation of aircrew readiness training resources for collateral training benefit. And finally, they include working with the army to define a force structure that leverages and optimizes tactical aviation technologies.

Only through consultative joint development can we continue to ensure that the air force’s way ahead remains consistent with that of the army and that tactical aviation remains relevant to the Army of Tomorrow and beyond. The philosophy of ensuring adequate liaison must extend to the lowest echelons if it is to be successful and if the process of educating both soldiers and airmen alike is to be widely embraced. Maximum integration of unit-level training and the creation and full exploitation of collateral training opportunities remain essential elements of the necessary long-term approach.

At the same time that the army provides the basis for the employment of 1 Wing’s war-fighting capability, much of that capability is of significant value in the context of domestic and international tasks, ranging from training to operations. While we are structured and exist to support an army, the supported army need not necessarily be our own. The recent and ongoing provision of tactical aviation support to both Multi-National Brigade (Centre) (MNB[C]) in Kosovo and Multi-National Division (South-West) (MND [SW]) in Bosnia are cases in point. More and more, the inherent flexibility of airpower (in this case tactical aviation) represents a multipurpose capability that can be applied to an increasingly broad range of air power problems. From this perspective, tactical aviation offers a stand-alone, readily deployable capability that can be dispatched easily as the sole sustained Canadian contribution to a larger multinational force or as the responsive weapon of choice to tackle a burgeoning domestic situation.

The validity of this approach is underscored by tactical aviation’s employability in operations across the spectrum of conflict. Of the operations envisaged by the eleven CF force planning scenarios, tactical aviation has been employed on six of them in the last 36 months alone while continuing to train and prepare for the two least likely but most critical tasks—continental and collective defence—at the far right of the spectrum. This is not simply retrospection on a highly successful past: the maintenance of tactical aviation represents the maintenance of a powerful doctrinal tool, part of the CF’s menu of force options available to respond to future events, both international and domestic.

Having provided an interlude concerning the growing relevance of tactical aviation to both the army and the air force, I would like to return to the discussion of the promise of the current aircraft and address some specific potential Griffon-based capabilities. In consideration of the classic roles of tactical aviation (reconnaissance, firepower and mobility), it is clear that this aircraft is close to saturation in the area of lift capacity and hence mobility. While incremental improvements and potential mid-life upgrades could expand this envelope considerably, by far the largest areas of potential platform growth lie within the realms of reconnaissance and firepower.

The ERSTA project remains 1 Wing’s top acquisition priority and promises a quantum leap in the ability of the aircraft to perform the reconnaissance role envisioned for it as part of the original statement of requirement (SOR) for its purchase. As pointed out, it also helps address a significant joint, army and air force capability requirement for information and intelligence technologies. As such, ERSTA promises to become part of 1 Wing’s core expertise and the centrepiece of our mid-term war fighting capability as we continue efforts to capitalize on the prospective employment of the aircraft to address hard doctrinal requirements. It promises to be valued not only

as a primary ISTAR component (complimentary to other components in the ISTAR "system-of-systems") but for its employment potential as an operational and strategic level asset as well. As the first programmed step in a longer-term process, the procurement of the ERSTA equipment will provide a quantum increase in the operational capability that 1 Wing is able to offer. The development of ERSTA employment and its integration into the Land Force and other systems will be critical if this capability is to realize its full long-term potential. ERSTA development and integration will, therefore, continue to be a principal 1 Wing program for the foreseeable future.

ERSTA acquisition and doctrine development are both on track to support a deployable capability by mid-2004. Fielding this capability brings its own challenges. Perhaps the most significant of these challenges lies in the fact that the acquisition is fiscally constrained by the remaining funds available within the CFUTTH project. As such, the six to ten mission kits being acquired represent the maximum capability that will be fielded without additional funding. As a figure driven by financial vice doctrinal realities, it is unlikely that this level of equipping will be sufficient to provide for the total operational and training need. As a result, work has been undertaken in concert with the Army Experimentation Centre that will attempt to define the number of ERSTA required within a tactical aviation reconnaissance section and to support the tactical aviation recce and information requirements of a battle group. The Director of Land Strategic Planning (DLSP) led Army of Tomorrow operational research will further investigate the ERSTA requirements of a main contingency force (MCF) brigade group. These undertakings will both validate doctrine and allow us to proceed with initiatives aimed at procuring modified numbers of equipment based on the evolving requirement and the availability of funds. It is believed that demonstrating the advantages of leveraging this third

generation RMA system will make its value readily apparent to a broad range of potential users at all levels. To this end, a program of demonstration using the first available prototype is being contemplated. It is foreseen that ERSTA will present itself as a viable investment opportunity in the months ahead.

We have seen that the army's enduring doctrinal tactical aviation capability requirements are captured in the traditional roles of tactical aviation: reconnaissance, firepower, and mobility. These capability requirements are also reflective of the CLS' exact priorities for tactical aviation during transformation and as part of the Army of Tomorrow. Coincidentally, perhaps the single largest area of latent potential remaining in the current airframe lies in the realm of firepower, to include the next logical step from ERSTA, an armed reconnaissance capability. This concept will start to be examined in detail as part of the Army of Tomorrow work being led by DLSP. To support this effort, limitations with the existing airframe will need to be clearly identified through a separate detailed concept analysis and a corresponding assessment made of the feasibility of pursuing incremental improvements or entirely new technologies. This assessment is the focus of a longer-term staff effort being undertaken within 1 Wing.

It must be recognized that the doctrinal tactical aviation support requirements of a brigade-sized force have traditionally been reconnaissance and mobility based. It is significant that on the modern battlefield a tactical aviation reconnaissance capability includes the ability to engage high value/threat targets as they are detected and, as necessary to fight for information so that the advantages of information can be fully exploited. The CJTL and the army's developing ISTAR doctrine both aim at exploiting the information edge that technology brings to the table. With ERSTA being capable of looking deeper than any other CF tactical battlefield system to acquire and designate targets, it does not

make sense to defer fielding a complementary capability that allows high value targets to be engaged at the limits of detection or identification (as part of an accelerated targeting cycle) should the commander so choose.

It must further be recognized that the doctrinal basis for grouping tactical aviation at the brigade level is also evolving. The MCF brigade is more likely to be deployed either as a special combat grouping with a high requirement for reconnaissance capabilities based on the brigade mission or as a formation capable of more independent operations. In addition, future parent divisions may be non-doctrinal, existing for more than a given operation, nor be postured or able to provide tactical aviation resources down to the level of the brigade due to the priority of division tasks (such as deep operations). Finally, in today's battlefield environment, integral tactical aviation is a core element of the all-arms team at all levels and extends the team's ability to exert its influence over the battle space. This is particularly germane to any discussion of the capabilities required for operations in a seemingly ever-expanding brigade area of operations. Tactical aviation-based firepower and reconnaissance generate situational awareness, freedom of manoeuvre, increased tempo, and precise application of firepower, resulting in a synergistic increase in the overall effectiveness of a force.

Certainly, the concept of an armed helicopter is something that can be validated through research and experimentation as a precursor to any formally stated requirement to arm the helicopter or acquire a dedicated system. Whether the Griffon itself can adequately fulfill this need or whether its inherent limitations require the acquisition of a dedicated system to conduct the extreme tasks associated with tactical aviation firepower is clearly a subject for further study. Notwithstanding these options, the considered equipping and employment of the CH-146 as an armed helicopter is a reasonable

and cost effective use of the unexploited portion of the aircraft's combat potential. Furthermore, by retaining the multipurpose character of the aircraft, the flexibility and relevance of tactical aviation to a wider range of users in the conduct of utility and mobility tasks is retained.

What is within the realm of possibility for this aircraft? While achievable, autonomous options, whereby precision weaponry is integrated into a single, ERSTA-equipped airframe, represent a technical challenge that may require moderate performance enhancements or better integration of aircraft systems to eliminate components and/or crewmembers. Something as simple as a transmission upgrade that delivers ten percent more power provides the required enabler. Short of this type of enhancement, there is no doubt that the current airframe could be armed as is, but such a solution is likely limited to a very basic capability (for example, two missiles on an ERSTA aircraft in a concept analogous to the OH58D Kiowa Warrior). Alternatively, sections, rather than individual ERSTA aircraft, could be armed. The latter concept involves tactical sections of three

aircraft consisting of a two-aircraft ERSTA/recce section augmented with a third aircraft dedicated to weapons delivery. Fire teams of additional armed aircraft can be formed and can come forward and operate with the ERSTA section, thereby optimizing the ERSTA section's op tempo—this employment concept is very similar to that developed by the UK Army Air Corps for armed helicopter operations and that planned by the U.S. Army for armed UH-60 employment. Further, such an armed aircraft is not tied to the target acquisition provided by its ERSTA-equipped wingman: it can provide fire support via any battlefield ground or airborne laser designator.

The ability of the CH-146 to function as an armed helicopter is as reasonable and assured as that of any existing armed utility platform. Comparable systems exist, such as the U.S. Army OH58D Kiowa Warrior, which have been successfully fielded in the light attack role. A quantum leap in capability is achievable at reasonable cost. Arguably, the most expensive components of the larger system are already being procured and will be life-cycle managed as the basic airframe, defensive electronic

warfare suite (DEWS), and ERSTA capability. An armed utility platform offers a revolutionary increase in capability as a result of an evolutionary step in the development of the airframe. Note that this concept is only revolutionary in the Canadian context. In the allied context it endures as a proven doctrinal necessity.

In closing, there is no doubt that tactical aviation is destined to be a defining force on the world's battlefields of the future. Ensuring our ability to fulfill that destiny in the Canadian context requires continuous effort to evolve tactical aviation in consonance with current and future doctrinal principles. This has always been a challenge for us, but both the impetus for change and the potential for accommodating it in a credible and cost-effective manner have conspired to present a window of opportunity for making significant strides in this direction. We need to fully exploit that opportunity in the spirit of joint endeavour.



From the Managing Editor

“It was as fine a performance as I’ve ever seen in the field...” Collective Training in Canada¹

by Major John R. Grodzinski, CD

FIRST, SOME OVERLOOKED ANNIVERSARIES...

Without any fanfare, the last two years have marked the half-century anniversary of two significant events that are still felt in the Land Force. The first event occurred in August 1950, when Canada agreed to send a “specially trained and equipped force to Korea”. This commitment would eventually expand to a brigade group. Between 1950 and the armistice, 21,940 members of the Canadian Army served in Korea and Japan, of which 1,543 were battle casualties. There were no major parades to commemorate this anniversary.

The next significant event was the provision of 25 Canadian Brigade Group to the NATO forces in Europe, which marked the beginning of a massive expansion of the army. In November 1951, the first elements of the 27th Canadian Infantry Brigade Group arrived in Rotterdam, marking the first occasion in peacetime when a Canadian formation was permanently assigned overseas. By 1993, when 4th Canadian Mechanized Brigade Group was disbanded, over 100,000 soldiers had served in Germany. The 1951 deployment was no mean feat, and began the regular dispatch of units and formations outside of Canada in peacetime. Has anyone spoken of a memorial to Canada’s contribution to NATO during the Cold War?

HERE COMES ANOTHER ANNIVERSARY...

The expansion of the regular Army brought with it the need to conduct collective and formation level training (the modern Levels 5, 6 and 7) on a

regular basis, something also completely new to the peacetime regular force. A training area was needed to allow a division—the commitment to Europe—to train. It was announced in 1952 that a training area would be established in Eastern Canada. During the spring and summer of 1953, Camp Gagetown was born. Over 194,000 acres of freehold land and 80,000 acres of provincial Crown land were expropriated. Construction of unit buildings, barracks and married quarters began. In August 1955, 1st Canadian Division held its first concentration at Camp Gagetown. The following year, 11,095 troops participated in yet another divisional exercise, practicing operations in a nuclear environment.

Across Canada, the other training areas such as Wainwright, Petawawa and Valcartier became centres for combined arms formation level training. Think about it—concentrations such as these were never done previously except during war. Between 1894 and 1907, “concentrations” occurred three times—twice by bringing the dispersed companies of one unit together and once as an assembly of permanent units. Between the two world wars, a single brigade concentration was held at Camp Borden in 1938. The pattern for the future was set in 1950. The Army commenced training regularly at formation level, which led the Director General of Military Training at Army Headquarters to develop the policies required to conduct this training. Although the division headquarters disappeared in 1958, brigade level training continued. The necessity to train in a divisional context was not forgotten, however, and in 1981, biannual concentrations were begun, at first in Gagetown and later in Wainwright. These necessitated the movement of units from

across Canada (some would call this strategic movement), the formation of an ad hoc headquarters (at least until Headquarters 1st Canadian Division was reformed), and the development of division-level exercise scenarios. Standards for measuring formation and unit performance were based on those developed by NATO. An entire generation of soldiers experienced varied and valuable training (and sometimes boredom) in a variety of scenarios, which often culminated in live fire at the combat team and battlegroup level. Remember the live fire camps at Suffield?

Then came the overseas tempo of the 1990s and this training effectively disappeared. Tactical skills and experience have suffered, and in some cases are lost. While annual concentrations by all three brigade groups are unlikely to ever occur again, efforts to allow at least one brigade to do so will hopefully refocus training and actually “forge soldiers, materiel, and time into combat-ready units and formations.”

What will follow in this, and a subsequent, editorial, is an overview of this early training, which may serve to provide some context to this issue.

AN OVERVIEW OF COLLECTIVE TRAINING, PART I: 1894 – 1914

THE PERMANENT FORCE

Permanent Force concentrations occurred three times between 1894 and 1914. The first two occasions brought the dispersed sub-units of one regiment together, while the third assembled most of the force in one area. At the time, Permanent Force regiments and corps had sub-units scattered across

the country, consisting in 1894 of the Royal Canadian Dragoons, the Royal Regiment of Canadian Artillery and the Royal Canadian Regiment of Infantry, totalling 904 all ranks. The Royal Canadian Regiment accounted for 395 of these personnel.² In 1901, the Royal Canadian Mounted Rifles was formed in Winnipeg (in 1909, they became Strathcona's Horse), and in the early 1900s, several support corps were formed. By 31 March 1910, the Permanent Force had grown to 206 officers and 2,591 men, with the Royal Canadian Regiment now having 944 personnel, or more than the entire permanent force in 1894.³

The first concentration in 1894 brought the dispersed companies of the Royal Canadian Regiment of Infantry together.⁴ In 1899, a similar exercise brought the four companies of the Royal Canadian Regiment to Rockcliffe, near Ottawa, and on 14 July, they began to conduct battalion level training.⁵ The battalion Commanding Officer was Lieutenant-Colonel W.D. Otter. Training included battalion attack and defence of defiles, woods and bridges; actions against cavalry and artillery; escorts to guns and convoys; and musketry and drills. An idea of the scope of training is provided by the instruction for Tactical Exercise No. XI published in Militia Orders.⁶ This tactical night exercise was conducted on 22 August. The general idea was that a Red Force⁷ was entrenched near Rockcliffe, while an enemy (Blue) was about three miles east of that position on the right bank of the Ottawa River. Blue Force was to reconnoitre the Red Force entrenched position and, if possible, assault it. The entrenchment was described as "not formidable". Blue Force included the Royal Canadian Regiment of Infantry, the Governor General's Foot Guards, and the 43rd Rifles, less one company. The Red Force was also known as "Skeleton Force", and had six guns from the 2nd Field Battery and one company from the 43rd Rifles, representing a battalion in defence. Red (Skeleton) Force was in position by 2100 hours, while Blue was some 1 1/2 miles to the east by 2130 hours. Blue advanced in three columns, each column moving on a compass bearing or prescribed route to the concentration point. Unfortunately, the compass bearings and marching

distances were not given in orders, leaving each unit to find its own way. The 43rd Rifles were the first to arrive in the concentration area and, after waiting some time for the other two units to arrive, conducted the attack unsupported at 2220 hours. Their assault was easily repelled and the umpires ordered the battalion to retire. The Royal Canadian Regiment and the Foot Guards then arrived and "advanced to the attack in excellent order, and delivered their assault at 2234 hrs. The ceasefire was sounded at 2236 hrs", ending two minutes of glory. This night exercise, probably the first conducted by the militia in Canada, was hailed as an unqualified success. It was noted that the "want of care in methodically arranging for and carrying out the formation of the columns for assault by the whole brigade before moving to the assault" was wrong, and that the guiding principle for night attacks should be a clearly defined and carefully marked alignment.⁸ Training continued until the end of August.⁹

In 1907, practically the whole of the Permanent Force was assembled at the recently opened camp at Petawawa for the first time. Included were both squadrons of the Royal Canadian Dragoons; "A" and "B" Batteries, Royal Canadian Horse Artillery; a heavy battery, Royal Canadian Garrison Artillery; No. 2 Company, Royal Canadian Engineers; eight companies of the Royal Canadian Regiment; and detachments of the Permanent Army Medical Corps, Permanent Army Service Corps and Canadian Ordnance Corps. The Royal Canadian Mounted Rifles in Winnipeg did not attend due to the distances involved.

The first object of the exercise was to allow units to complete their annual squadron, battery or company training on ground suitable for "up-to-date" training, which was impossible at their own stations. This was also the first occasion that two batteries of horse artillery were able to function in an artillery brigade¹⁰ environment. This was followed by combined training and field operations that had previously been impossible. Other activities included:

- reconnaissance and scouting by cavalry and infantry;

- convoys and marches;
- fire discipline and field operations of all arms in combination; and
- field firing operations, by all arms.¹¹

"A" squadron of the Royal Canadian Dragoons and one battery of Royal Canadian Horse Artillery conducted movement exercises while en route to Petawawa. The Commandant appointed for the exercise was Brigadier-General W.D. Otter, with Lieutenant-Colonel W.G. Gwatkin, a British officer serving in Canada, as Chief Staff Officer. Units arrived in Petawawa throughout June and early July, with training commencing in early July.

The importance of collective training was considered so essential that it was to have become an annual event, although it was expected that Winnipeg-based units would never be able to train with other permanent units.¹² Plans were developed for the Permanent Force to undergo yearly progressive training beginning in September, culminating with combined training in a central camp the following August.¹³ Unfortunately, the 1908 tercentenary of the founding of Québec and funding limitations precluded any collective training. Indeed, funding limitations made such training impossible until 1914.

THE NON-PERMANENT MILITIA

Opportunities for collective training and experience in commanding formations were somewhat better in the Non-Permanent Militia. Beginning in 1906, the Non-Permanent Militia was organized into 20 infantry brigades and 7 mounted or cavalry brigades.¹⁴ In April 1911, in order to meet the needs of mobilization plans, the four commands in Ontario, Quebec and the Maritimes were reconstituted as six divisional areas, providing six infantry divisions and four cavalry brigades.¹⁵ If mobilization occurred, these units and those in western Canada would provide elements to an expeditionary division and a mounted brigade.

The divisional areas maintained the responsibilities of the previously established Commands while the brigades and units

within them were regrouped to reflect the new structure. Each division¹⁶ had three infantry brigades, each of three or four regiments,¹⁷ and divisional troops. Cavalry brigades included three cavalry regiments, a horse artillery battery, ammunition column, troop of engineers, wireless telegraphic detachment, army service corps company, and a cavalry field ambulance. Due to funding restrictions, manpower limitations and equipment shortages, some headquarters and units within each division and cavalry brigade were not organized.

Training was conducted annually for periods of about two weeks at camps of instruction, in places like Goderich,

Niagara Camp and Kingston in Ontario; Laprairie, Three Rivers and Lévis in Quebec; and Sussex, Aldershot and Charlottetown in Nova Scotia and Prince Edward Island. Each camp included a commandant, staff, and a number of brigade staffs and units under training. Training included courses of instruction and provided “sufficient drill and manoeuvre to enable troops to co-operate and act together in the field”.¹⁸ This was unit level training, and formation level collective training as we know it today never occurred. Cavalry and artillery training was handicapped by the size of the training camps, while the quality of training was generally reported as

unsatisfactory. Reduced attendance and increasing numbers of unqualified officers meant that training schemes were increasingly difficult to arrange, thus bringing extremely limited results.

In the next issue: inter-war training.



ENDNOTES

1. Comment made by Major-General A.D. Meach, U.S. Chief of Infantry, upon observing Exercise “Mobfoot” at Camp Wainwright in 1955. Captain D.J. Johnstone, “Exercise Mobfoot at Camp Wainwright”, *Canadian Army Journal*, Vol. X, No. 4, October 1956, p. 17.
2. Report of the Department of Militia and Defence, Year Ended 30 June 1894, p. 1.
3. Report of the Department of Militia and Defence, Year Ending 31 March 1910, p. 14.
4. R.C. Fetherstonhaugh, *The Royal Canadian Regiment, 1883 – 1933*, p. 63.
5. Militia Order 118, 24 June 1899, pp. 2-3.
6. Militia Orders 149, 2 August 1899 and 167, 23 August 1899.
7. Until the Second World War, Imperial forces marked friendly forces with the colour red and enemy blue. This changed during the Second World War, when the British and U.S. Armies standardized their map marking procedures.
8. Militia Order 167, 23 August 1899, pp. 1-2. It should be noted that this Militia Order is essentially the equivalent of a modern Post-Exercise Report.
9. Fetherstonhaugh, pp. 57-60.
10. Note that at this time artillery was brigaded and not organized in regiments.
11. *Report of The Militia Council for the Dominion of Canada on the Training of the Militia During the Season of 1907*, pp. 11-12.
12. *Interim Report of The Militia Council for the Dominion of Canada for the Fiscal Year Ending 31 March 1908*, p. 68, paragraph 18.
13. *Interim Report of The Militia Council for the Dominion of Canada on the Training of the Militia During the Season of 1908*, p. 2, paragraph 16.
14. In 1906, 20 infantry brigades were established along with 2 cavalry brigades. By 1911, this had expanded to 23 infantry brigades and 7 cavalry brigades.
15. General Order 59, 12 April 1911.
16. This overview is provided from the Quarterly Militia Lists of 1906, 1910 and 1911.
17. Doctrinally, infantry brigades were to include four regiments, but in some areas, insufficient units were available to achieve this.
18. Report of the Department of Militia and Defence, Year Ended 1910, pp. 5-6.

From the Directorate of Army Doctrine

The Threat from Blast Weapons

INTRODUCTION

Nations around the world are always working on producing more effective weapons. The speed of such developments will change depending on the situation; the crucible of war often results in rapid advances. During a war or other conflict, a nation is usually more willing to devote extra resources to such Research and Development (R&D). Involvement in a war also has the effect of focussing efforts on any unique threats in that conflict, whether that effect is due to the environment or the opposing forces' capability. As an example, the Americans created or improved many unique and new weapons systems during the Vietnam conflict, including unattended ground sensors, night vision devices, unmanned aerial vehicles and standoff surveillance.

It appears that the Soviet-Afghanistan conflict was the catalyst for the Soviet Army to develop new weapons, as Afghan guerrilla forces stymied its operations. One weapon that was developed to overcome some of the unique problems posed by the mountainous terrain was a hand-held launcher and projectile that used blast as its primary effect. This initial development has apparently led to a sustained development effort to create a class of blast weapons ranging from hand-held to tank chassis-mounted systems. The West has greeted the identification and development of this class of weapons with interest.

BACKGROUND

All explosives create a blast wave, but conventional explosives usually produce a short duration, high-pressure effect. Blast weapons, by contrast, are designed to produce as much blast as possible. To do this, weapon designers will maximize the

explosive content and minimize extra weight in the form of shell casing. In addition, extra large burster charges and other mechanisms are used to increase the dispersion of blast-generating energetic materials.

Most of the conventional explosive weapons in the world are designed to use the kinetic energy of projectiles to create their effect. Conventional explosive weapons usually use the energy of the explosion to work on another material, whether it is creating and throwing shrapnel at high speed or forming a shaped charge to punch through armour. The blast effects are normally incidental side effects, which are useful nonetheless. This can be demonstrated by observing artillery shells and hand grenades. Artillery shells use their explosive filling to shatter the shell and then throw the fragments at high speed to create the destruction desired. Modern hand grenades use pre-fragmented liners that are thrown out by the explosive charge. Yes, there are stun grenades, but this is a specialized subset of ordnance. It is only when you look at large aircraft bombs, 250 kg or larger, that you find that the majority of the effect is caused by blast and not shrapnel. It is not clear if this is deliberate or simply a result of the evolution of these weapons (desire for increased bomb weight translates into a greater percentage of explosive filling to case weight?). The only other common weapon that relies on blast is the anti-tank mine, usually in improvised or first generation mines. These mines rely on the blast effect of the explosives to disable or destroy the vehicle. This is inefficient, which is why more modern mines use smaller amounts of explosives and rely on other effects, such as shaped charges, to attack the vehicles.

Due to the reliance on shrapnel, most of our defensive measures have focussed on defeating the shrapnel

effects. That is why we wear helmets and body armour and build bunkers and trenches. Shrapnel effects are also the focus of the design efforts of our armoured vehicles. Unfortunately, it is becoming clear that these same protection measures do not always effectively protect us against some of the effects of blast weapons.

The first generation of blast weapons was apparently developed in the late 1960s. Since then, blast weapons have been under continual development, resulting in more portable and effective versions becoming widely available on the world market. It is interesting to note that R&D on fave-air explosive (FAE) blast weapons in the West was largely curtailed or, in cases such as the UK and Canada, entirely terminated in the 1980s because they were considered too dangerous to handle, particularly for naval transport. Technological advances in explosives have since resulted in the development of safer, more effective types of blast weapons referred to as "thermobaric weapons" or "enhanced blast weapons." Because this technology originated from Russia with no Western equivalents for comparison, the English terminology for the various types of blast weapons is very confusing, and many foreign weapon designers use the terms incorrectly. Some of the novel terminology used to identify blast weapons includes vacuum bombs, "FAE-like," high-power blast, and "high-blast." The Russians tend to be fairly consistent with the use of "thermobaric" when referring to the RPO-A hand-held disposable launcher, which is known to have been used in Afghanistan and both of the Chechnyan conflicts.

Because of the potential prevalence of these weapons worldwide, blast weapons are an increasing threat to the Canadian Forces (CF) as it



can be produced in two ways: the traditional two-stage event or the more recent development of a single-stage weapon.

In general, a two-stage blast weapon creates its effect by an initial explosion of the carrier shell, which disperses fuel into the air as vapour, droplets or dust—a “finely dispersed cloud.” This cloud of liquid fuel or dust is subsequently detonated, creating a blast wave that produces high levels of overpressure. In the case of FAE, some systems have produced overpressure levels that are well in excess of 3-4 times that of TNT, on a pound per pound basis. Latest Russian designs claim to have improved on this performance by another 1.5 to 2 times by enhancing blast dispersion. The duration of an FAE blast wave is typically also of much longer duration (relatively) than a conventional explosion.

By contrast, a single-stage weapon uses one explosive to burst open and disperse the fuel. The composition of this fuel allows it to ignite and progressively propagate a shock and blast wave. These are sometimes referred to as “thermobaric” weapons, as they have an intense fireball due to the considerable amount of afterburning that occurs (the term originates from the fact that it involves thermally generated blast or baric).

Blast weapons act differently than shrapnel-based weapons, which essentially travel in straight lines. The intense heat of the fireball of the thermobaric weapons must also be considered. Waves, whether water, sound or blast, have the same characteristics and properties: waves reflect off surfaces, travel through openings and can be magnified anywhere two or more waves intersect. Most importantly, however, waves can also refract around corners, and reflecting or refracting waves can superimpose upon each other to greatly increase their intensity over localized regions. Therefore, blast weapons can penetrate buildings, bunkers or trenches through windows, doors, firing ports, observation slits or other openings. This destructive blast can also enter vehicles through open

hatches, firing ports and air intakes. Once inside confined spaces, the destructive effects of the blast wave are magnified significantly as it reflects off hard surfaces.

The overpressure from blast waves can kill or injure personnel by crushing internal organs, causing damage to the lungs and intestines. Another source of injury is simply the effect of the blast wave literally throwing objects and personnel around. Inside a confined space such as a room, a blast weapon can blow out all of the walls, with the potential effect of collapsing the structure. Often, an internally-activated blast weapon will literally lift the roof off of the load-bearing walls thereby rendering the entire structure unstable so that it collapses easily. The heat effects, as mentioned, can cause additional burn injuries or fires, although this is considered a secondary kill effect and some blast weapons are designed to almost exclusively deliver blast kill. As with all explosives, secondary fragments are a concern even if the design is not intended to maximize fragment delivery.

Blast weapons are not the perfect weapons for all circumstances. The destructive effects of blast waves are magnified in confined spaces, but they dissipate quickly in the open. This characteristic could be used to the advantage of any force confronted with these weapons. At the same time, the relatively short range of the blast effect, coupled with the low quantity of shrapnel produced by blast weapons, allows them to be used to for close support. Assaulting troops can manoeuvre more closely to their supporting fire than they can with conventional, fragment-producing weapons.

BLAST WEAPON SYSTEMS

Since the initial development of blast weapons, a variety of weapon systems have been developed or modified to use them. Generally, in order for a weapon system to be chosen, it must support the use of thin-walled carrier shells to maximize

conducts operations around the world. Much of the information about these weapons has been classified until recently. However, the proliferation of blast weapons demands that Canadian soldiers be informed of their capabilities and the means to defend against them or reduce their potential effects.

AIM

The aim of this primer is to provide general information on the threat posed by blast weapons and what the Canadian Army is doing to develop countermeasures. This primer will lead the reader through a sequence of information to ensure a basic understanding of blast weapons, followed by an overview of the threat, known countermeasures and, lastly, some information on how the Army is tackling the problem. More detailed information on threat weapons and countermeasures can be found in *The Bulletin* on “The Threat from Blast Weapons” produced by the Army Lessons Learned Centre.¹

BLAST WEAPONS

The two common types of blast weapons are FAE and thermobaric. The terminal effects of these two types are quite different at close ranges but are basically the same at locations well outside the fireball. The blast effect

the amount of the fuel and minimize the amount of metal that does not contribute to the blast effect. It is obvious that rocket systems lend themselves to this feature, whereas conventional tube artillery shells do not. Another concern with tube artillery is that the set back forces cause problems for the liquid fills common to most blast munitions. Stability and accuracy of the airborne projectile is another consideration for those blast-fill formulations that are pastes or liquids.

The current blast weapons threat ranges from artillery to hand-held weapon systems. Artillery systems include the large diameter, multiple-barreled rocket launchers such as the widely available 122mm GRAD (BM-21), 220mm URAGAN and 300mm SMERCH. The most widespread threat—therefore, potentially the most dangerous—comes from the wide variety of shoulder launched weapons that are now available on the open market. Examples of these types of weapons are the Russian RPO-A (SHMEL) and the TBG-7V (TANIN). These infantry weapons are used against defensive positions, whether bunkers, defended buildings or other field fortifications. Assault troops are able to manoeuvre within 40 metres of the objective when RPO-A is employed. However, because they cannot penetrate a protective barrier, more sophisticated blast weapons

have been developed. These have a double (often incorrectly referred to as “tandem”) warhead arrangement, which uses a precursor high-explosive anti-tank charge to create a hole through the target to allow a secondary, enhanced-blast warhead to pass through. This double warhead arrangement affords an anti-armour and fortification penetration capability and allows the enhanced-blast charge to be detonated when completely inside the target.

COUNTERMEASURES

Some countermeasures are known today, which require the application of common sense with knowledge of the weapon effects. Some of the countermeasures are procedures that are already taught: camouflage and concealment, dispersion and deception are all valid measures that will reduce our vulnerability to any weapon system. Other measures are more specifically targeted against blast weapons.

As with many other activities in the military, the first step relies on intelligence. Identification of the presence or absence of blast weapons is important as it allows commanders at all levels to consider the appropriate countermeasures. Defences, as an example, could be sited in depth with early warning systems in place. Offensive measures could be designed

to target the destruction of blast weapons systems or their crews. Personnel carrying or about to employ blast weapons could be engaged as priority targets, rules of engagement permitting. The ability of blast weapons to defeat standard field fortifications reinforces the requirement for such fortifications to be mutually supporting within the defensive framework. This concept is not new, as any stand-alone defensive position is more easily taken than a properly supported position.

Current personal protective equipment (helmets, ballistic vests and eye protection) can be used to reduce the effects of flying debris and the thermal effects of the fireball. Armoured fighting vehicle crew suits and gloves will also provide a degree of protection against flash burns, as will almost any skin covering. The difficulty is providing adequate protection against the overpressure created by a blast weapon. R&D is working on this, with initial research concentrating on getting a much better understanding of the effects on the body. This research is a necessary first step leading to possible protective measures or equipment.

Research conducted at Defence Research Establishments Valcartier and Suffield regarding mine blast effects has demonstrated that the best means to protect the occupants of field fortifications from the effects of blast weapons is to prevent the blast wave from entering the structure. Openings such as observation ports need to be covered with materials that will not shatter and become lethal projectiles. Screens should also be used so that the weapons detonate away from the building. The construction of a building must be carefully considered before using it for defence (this is also nothing new in urban warfare). Masonry or brick buildings with concrete floors and roofs are liable to collapse if the walls are blown out or damaged by a blast weapon. By contrast, most modern high rise buildings with curtain walls won't collapse, although the walls normally offer scant protection.



Trenches are designed to protect troops from fragments and blast from conventional weapons. The effects of blast weapons reduce, but do not negate, the overall effectiveness of trenches. Shelter bays can be protected to a certain extent by hanging a heavy curtain across the bay entrance. Notwithstanding the reduced effectiveness of trenches against blast weapons, they can still provide protection against debris and the other conventional weapons systems that will continue to be the overwhelming threat.

CAMPAIGN PLAN

To this point, this article has discussed the threat and current countermeasures. To coordinate the work to improve our countermeasures, the Army has been developing a campaign plan. Lines of operation have been identified with specific goals and criteria for success. This plan is under revision, but the basic outline remains valid. The centre of gravity for the Army on the use of blast weapons is assessed to be the capability to protect our soldiers against blast munitions. This has focused the campaign plan's main effort on defensive issues, which range from individual protection, field fortifications and medical countermeasures. These lines of operation are being developed to lead the Army through decisive points to protect our centre of gravity. They include education, intelligence, doctrine, tactics, R&D, weapon system procurement and public relations.

The soldiers in our Army are well educated, which aids in one of the best defences against this new threat: giving our soldiers the information they need to deal with blast weapons. Knowledge dispels fear and will allow our soldiers to better use the tools they have been

given. There have been some concerns raised about the potential morale problems of soldiers faced with casualties caused by blast weapons. While there are many aspects to morale, the morale of our soldiers can only be helped by increasing their knowledge, providing them with the best protection that can be devised, good equipment and the knowledge that the health care system can help them.

As already mentioned, an effective intelligence organization will be a key building block in ensuring we are properly protected against blast weapons. This is not new, and history is replete with examples of the importance of effective intelligence, with as many examples of failure when intelligence was not available or used. Intelligence allows the commander to decide on changes to the operation or protective measures to meet the threat, and it allows national resources to properly develop countermeasures.

Potentially, one of the simplest countermeasures could be doctrinal. The Army might be able to change some of the ways it conducts its operations. This change is already underway, with some recent war games and operational research considering different ways to deploy and act in the face of blast weapons. There are no conclusive results at this time, but the Directorate of Army Doctrine is taking care to include the threat and known countermeasures in its work.

R&D is working on countermeasures in a variety of areas, from individual and vehicle protection through to field fortifications. This is a slow but necessary process to ensure that we develop effective countermeasures and don't waste time or resources.

The Army has made no decision on procuring blast weapons; such procurement is a lower priority in the campaign plan. It is also a lower priority for the procurement staff, who are busy managing the large projects currently underway. There is currently no identified capability gap—the first step in any acquisition—that generates the need to procure blast weapons.

Lastly, the campaign plan identifies public affairs as a line of operation. There are two components of this line: internal and external communications. Internally, we need to inform our soldiers of the threat and what we are doing. The Bulletin and this primer are part of this internal communications activity, but they are only the start. Externally, the Army must be prepared to explain the threat from blast weapons and what we will be doing to protect our soldiers and our missions.

SUMMARY

Although blast weapons represent a new and increasing threat to Canadian troops, the effects that they produce are not a mystery. The Army will examine its doctrine, tactics and equipment in order to ensure that it is well prepared to face blast weapons. The intent of this primer has been to increase the awareness of the Army to the threat from blast weapons. Research on countermeasures to blast weapons and their effects is happening now, and results will be incorporated in our doctrine and equipment once it is available.

Prepared by Lieutenant-Colonel A.F. Markewicz (DAD 8 Protection) in consultation with technical experts at National Defence Headquarters and other organizations.



ENDNOTES

Other sources of information:

- Grau, Lester W. and Timothy Smith. "A 'Crushing' Victory: Fuel-Air Explosives and Grozny 2000." Fort Leavenworth, KS: Foreign Military Studies Office, 16-09-2000. A US military article re the use of FAE in Grozny, which first appeared in the August 2000 issue (Vol. 84, No. 8) of the *Marine Corps Gazette*, pages 30-33.

- Leaf, Tim. "Thermobaric Weapons: A Weapon of Choice for Urban Warfare." Marine Corps Activity Note (MCIA 1142-001-99), August 1999.

1. The Army Lessons Learned Centre, "The Threat from Blast Weapons," *The Bulletin*, Vol. 7, No. 3 (January 2001).

Manstein's Counterstroke 1943

by Major S. Kooistra

INTRODUCTION

In this day and age, the largest foe we fight consists of generic enemy force (GenForce) formations in staff college exercises, and our professional focus tends towards future developments—read new weapons, new fighting vehicles, future non-state conflict scenarios, and so on. Thus, the study of military history often takes a back seat, and lessons and insights from the past are often forgotten in our rush to predict and develop our future. My contribution to the debate on our future is the following analysis of a largely ignored World War II East Front operation that occurred between the fall of Stalingrad (winter 1942/1943) and the commencement of the Kursk offensive (summer 1943). This operation is often referred to as “Manstein’s Counterstroke” against overwhelming Soviet forces in February 1943. It is illustrative of the fundamentals of manoeuvre warfare, particularly mission command and how decisive combat power can be generated at a given time and place to turn defeat into victory. As for our future, the campaign provides lessons for future staff college commanders combating a GenForce enemy. For the futurists, it reiterates that a military force is only as good as how it is commanded and employed—regardless of technology and environmental conditions.

THE CAMPAIGN

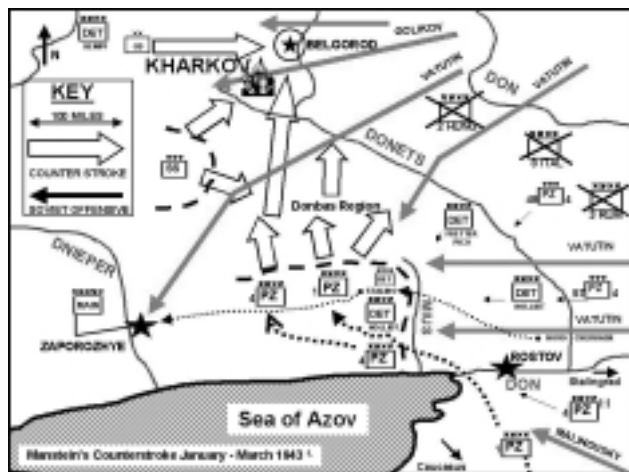
The destruction of the Sixth Army at Stalingrad by the end of January 1943, left the German front in a very precarious situation. To exploit their success, Soviet offensive operations began in mid-January to bring about the total collapse of the German southern front. The fact that the Soviets possessed an overwhelming numerical and positional advantage should have guaranteed them victory. Manstein, however, defeated the massive Soviet onslaught by readjusting his forces to set the conditions for a decisive flank attack. Although the losses on both sides were very high, the campaign is a brilliant example of Manstein’s operational skill in avoiding the catastrophic destruction of the German south front.

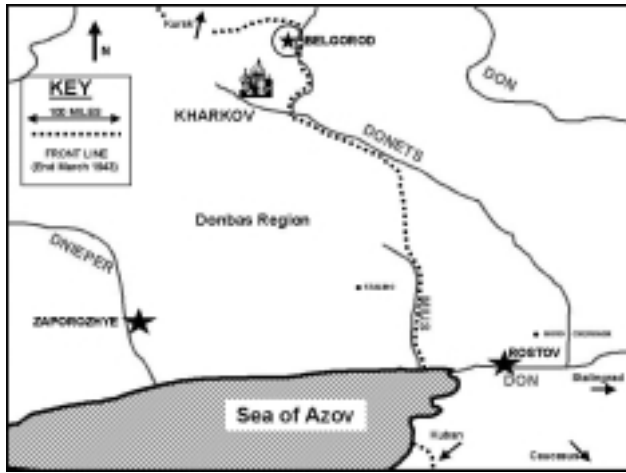
The situation on the southern wing of the German front was critical after the isolation of the Sixth Army at Stalingrad. Manstein’s attempt to linkup with the beleaguered Sixth Army failed in late December 1942, and the pressure against the Germans increased when Soviet forces surrounding Stalingrad were shifted to attack westward. The soldiers fought in bitterly cold conditions. Kurt Meyer was with the SS Panzer Corps, specifically with the Leibstandarte Division. He described the cold in one telling passage:

My men are wearing four and five suits of underwear and we are still freezing. We defecate in our clothes with no discomfort because it freezes. Of the transport horses only the females remain. The males died when their urine froze during passage.¹

By mid-January 1943, the Soviets were destroying the Hungarian, Italian and Rumanian Armies and had created a 200 mile gap in the German front.² Weak elements of the Fourth Panzer Army and emergency units fought to delay the Soviet army onslaught. The Soviet forces were in an ideal position to take Rostov 185 miles away and cut off both Army Group A 400 miles to the south in the Caucasus and Manstein’s Fourth Panzer Army 250 miles to the east, outside Stalingrad.³ With the German front in disarray, General Vatutin, Commander Southwest Front, proposed to the STAVKA⁴ a plan to destroy the southern wing of the German Army. The STAVKA approved the three-front attack, code-named Operation GALLOP, on January 20th with a start date of January 29th. In the meantime, Vatutin was directed to keep up the pressure against the Germans. The intent of Operation GALLOP was to cut off and destroy both Manstein’s Army Group in the Donbas region and Army Group A in the Caucasus region in seven days.⁵ The Voronezh Front, commanded by General Golikov, would attack in the North, securing the Kursk and Kharkov regions, while Vatutin’s Southwest Front would secure the Donbas region. The South Front would support these attacks by cutting off and isolating Army Group A in the Caucasus. Outnumbered by a factor of approximately four- or five-to-one and given the dislocation of the German forces, the situation was critical.⁶

Despite the acute danger to his forces, Manstein set in motion a series of operations to thwart the Soviet attack and restore the front by withdrawing and shaping the Soviet penetration until they over-extended their advance. He then planned to launch a counterattack against the weak Soviet flanks.⁷ Manstein needed both time and the operational





freedom to conduct his operation. To this end, desperate fighting took place to prevent the isolation of Army Group A and to gain and bring in reinforcements, notably the First Panzer Army from Army Group A. It was a race against time. To the north, the SS Panzer Corps moved in to secure Kharkov. However, the overwhelming superiority of the Soviet forces, coupled with their positional advantage, eventually pushed the Germans back.

Manstein withdrew his forces behind the Mius River after the First Panzer Army succeeded in getting through the Rostov gap.⁸ He accepted the risk of weakening the Mius River line by withdrawing the Fourth Army and placing it on the left flank of the First Army. The Soviet advance continued against Zaporozhye. In the north, Golikov recaptured Kharkov, Russia's fourth largest city. Against orders, the SS broke out of Kharkov and reformed to the southwest.⁹ On February 20th, with the lead Soviet units closing in on Zaporozhye, Manstein launched his counterstroke with the First and Fourth Armies from the south.¹⁰ Two days later, the SS Panzer Corps (now under Manstein's command) was committed to the counterstroke.

The Soviets were completely caught off guard. The SS Panzer Corps and Fourth Army linked up and continued their advance, eventually recapturing Kharkov. The Gross Deutschland Division from Army Detachment Kempf moved quickly to support the operation and captured

Belgorod. At the same time, Kharkov was retaken by March 14th.¹¹ The end-state of March 1943 was the restoration of the German front along the Donets River, in line with the Mius River, creating the Kursk salient. The spring thaw prevented any further attacks and both armies used this time to consolidate.

- Focus on main effort
- Act boldly and decisively
- Agility—Act quicker than the enemy can react
- Avoid set rules and patterns
- Command from a position to influence the main effort
- Support manoeuvre with firepower¹⁴

These inter-related fundamentals are well suited to demonstrate Manstein's mastery of the operational art and his manoeuvrist approach.

FOCUS ON THE ENEMY

Manstein focussed on the enemy both physically and psychologically. He knew where the Soviets were going and their intention to cut off the German armies in the south. Hitler, who demanded Manstein not lose any ground to the Soviets, typically opposed any retrograde movement. Knowing that the survival of two army groups depended on their withdrawal, Manstein demanded an interview with Hitler that took place on February 6th.¹⁵ Manstein won his argument and gained the permission he needed. Rather than fight to retain ground, he was able to withdraw and place his forces in position for his counterstroke against the weak Soviet flanks. This tactic had significant psychological ramifications. The Soviets were considered to be carried by the herd instinct and, when faced by surprise and unforeseen circumstances, fell prey to panic.¹⁶ The combination of physical and psychological focus and the avoidance of fighting for ground were critical factors in Manstein's success.

The Soviets, though, were ground-focussed on objectives. This focus ultimately led to the creation of a dangerous gap between Golikov's and Vatutin's fronts. Golikov attacked westward towards Kharkov, with its political importance as the fourth largest city in Russia. Vatutin attacked southwest in order to achieve a thrust deep in the rear of the German forces to cut them off in the area of Zaporozhye. The Soviet thrust was thus split. The focus on ground was a major factor in the failure of the

Both sides suffered appalling losses. The Rumanian, Hungarian and Italian Armies were wrecked, along with 68 German divisions, including those lost at Stalingrad. The Soviets claimed to have put over one million soldiers out of action, while German estimates of east front strength set it short of 470,000 men.¹² The Soviet losses were equally appalling. Although accurate figures are difficult to determine, during the first few days of the counterstroke, 615 Soviet tanks were destroyed and 1000 guns captured. The Soviets counted 23,000 dead on the battlefield and only 9000 prisoners taken, but the severe winter conditions allowed many to escape between gaps in the German positions.¹³ As a result of these losses and the spring thaw, no further major actions were fought until June 1943, when the Germans launched Operation CITADEL in order to destroy the Kursk salient formed by the end-state of Manstein's counterstroke.

ANALYSIS—FUNDAMENTALS OF MANOEUVRE WARFARE ILLUSTRATED

The casualties on both sides appear to be indicative of simple attrition warfare, but Manstein's success and the Soviet failure lend themselves to illustration through the following fundamentals of manoeuvre warfare:

- Focus on the enemy
- Give mission-type orders
- Exploit tactical opportunities
- Avoid enemy strength; attack weakness

Soviet offensive when Manstein later exploited this gap between the two Soviet fronts.

GIVE MISSION-TYPE ORDERS AND EXPLOIT TACTICAL OPPORTUNITIES

The Germans were masters of mission command. In the confusion and crises of the Soviet offensive, orders command would have been disastrous.¹⁷ The ability of subordinate commanders to take action as they saw fit to exploit tactical opportunities was a critical factor in the German success. First, Manstein managed to gain a freedom of action seldom seen at his level.¹⁸ As mentioned above, he clashed wills with Hitler in order to take action as he saw fit, and he gained further freedom of action by using the following technique:

Something which also has been discussed already and was even harder to overcome was Hitler's dilatoriness in the taking of urgently needed decisions. We could not, after all, compel him to give an order. In such cases one had no choice but to report that in default of an OKH directive by such-and-such a time or such-and-such a day, we should act at our own discretion.¹⁹

By using this method, Manstein "always managed to get the requisite action taken in the face of Hitler's interference or procrastination."²⁰

Second, Manstein also gave his commanders their freedom of action. Commanders were given tasks and the reasons why they were to be carried out.²¹ Manstein wrote the reason he succeeded despite a series of crises:

is that the army and army group staffs adhered firmly to two well-established German principles of leadership:

- (I) Always conduct operations elastically and resourcefully;
- (II) Give every possible scope to the initiative and self-sufficiency of commanders at all levels.²²

The Chief of Staff for the Fourth Army, General von Mellenthin, echoed these comments when he wrote about the Fourth Army's actions in February and March:

High-level commanders did not restrict the moves of armoured formations, but gave them "long range" tasks.²³

These operations showed once again what German troops were able to do when led by experts in accordance with accepted tactical principles, instead of being hampered with "holding at all costs" as the battle cry.²⁴

The freedom of action gained by using mission command allowed subordinate commanders to achieve their tasks as they saw fit in a highly fluid and dynamic situation.

Manstein, however, did retain control of his forces when necessary. The aspect of when he intervened in the operations of his forces is illuminating:

As far as my own headquarters was concerned, I think I can say that we only intervened in the operations of our armies when it was quite imperative to do so . . . On the other hand, we refrained on principle from proffering off-the-record "advice," which kills all initiative and hides responsibility.²⁵

An example of one such intervention can also be related to Manstein's focus on the enemy, rather than the ground, during the recapture of Kharkov:

The SS Panzer Corps, wishing to lay the recaptured city at "its Fuhrer's" feet as a symbol of victory, was eager to take the shortest route there, so that the Army Group had to intervene vigorously on more than one occasion to ensure the corps did not launch a frontal assault on Kharkov and become tied down there while enemy elements still fighting to the west of the city were able to make good their escape. In

the end it was possible to bring the SS Panzer Corps round to the east. The city fell without difficulty, and we succeeded in cutting off the retreat of considerable numbers of the enemy across the Donetz.²⁶

Conversely, control of the Soviet forces was the STAVKA directed. The STAVKA issued orders based on their interpretation of the situation, then passed them to the front commanders, who in turn issued their orders to their formations:²⁷

The rigidity of Russian methods proved a serious defect . . . a Russian attack was planned at Army level, and the preliminary grouping was a slow process. Each unit was provided with a precise objective and given no discretion whatever to deviate from that objective.²⁸

Every commander down to company level had his commissar beside him. "Why have you broken off your attack? Renew your attack at once or you will be shot." Such were the messages intercepted during the Russian offensive.²⁹

Army level commanders were directed to continue their advance rather than deal with the threat to their flanks.³⁰ The orders method of command proved disastrous.



Manstein's Counterstroke 1943



FOCUS ON MAIN EFFORT

Main effort within our doctrine is “the activity that the commander considers crucial to the success of his mission at that time.”³¹ In order to unify the efforts of his command, Manstein’s first main effort was “to fight for time” to keep the Rostov gap open.³² Once Manstein withdrew his forces to the Mius River, the next main effort was to concentrate the maximum amount of combat power for his counterstroke.³³

One could argue that the Soviet main effort was the destruction of the German south front, but their split thrust on Kharkov and Zaporozhye, along with numerous other thrust lines along their wide frontage, shows that the STAVKA did not unify the Soviet efforts by designating and supporting a main effort:

In the winter offensive the Soviets sought to achieve too many strategic (and operational) objectives . . . the Soviets had not yet fully comprehended the shadowy line between the art of the possible and the reckless.³⁴

This lack of focus fits hand-in-glove with the next fundamental as to why the Soviets failed to use their numerical superiority to advantage.

AVOID ENEMY STRENGTH; ATTACK WEAKNESS

The ground-focussed Soviets ignored the key German weakness—numerical inferiority. The Soviet advance towards Zaporozhye followed the path of least resistance, became overextended and unsustainable, and was finally destroyed.³⁵ The Soviets ignored the threat to their flanks even when Vatutin’s forces “bumped” the SS Panzer Corps in the north. Rather than fix and strike this force, the advance was deflected and continued further south.³⁶ The key German weakness was their numerical inferiority, and the failure of the Soviets was their inability to coordinate and bring their overwhelming numerical superiority to attack the weaker German concentrations.³⁷ On the other hand, Manstein avoided a head-on confrontation and used the delay and defence to attrit, shape and fix the strong Soviet thrust, thus allowing him to concentrate his armoured forces on the weakening Soviet flanks.

ACT BOLDLY AND DECISIVELY

There is a fine line between risk taking and recklessness. Manstein’s bold plan was essentially a series of calculated risks based on his judgement of enemy intentions. As Manstein writes:

In war, however, it is so often the simple things which prove hardest to carry out, the real difficulties lying so much in the taking of a decision as in its unswerving execution.³⁸

While no one can prove beforehand that a situation will develop in such-and-such a way, the only successful military commander is the one who can think ahead. He must be able to see through the veil in which the enemy’s future actions are always wrapped, at least to the extent of correctly judging the possibilities open both to the enemy and himself.³⁹

He accepted risk to his northern flank while holding open the Rostov gap. When he withdrew to the Mius line and later moved the Fourth Army to position it for the counterstroke, he accepted the risk of weakening his Mius line in order to have sufficient combat power for his attack. At his level of command there is no evidence of “order and counter-order.” Several crises occurred where he could have intervened or interfered. For example, on his weakened Mius River line, a Soviet tank corps broke through, and the German forces at hand finally broke up the attack.⁴⁰ At his level of command, Manstein did not merely react to each and every situation. Decisions were made and he allowed his commanders to get on with their jobs.

The Soviets, on the other hand, failed to translate their ambitious plan into bold and decisive action. Their onslaught was reckless and poorly conceived; they ignored what the Germans were really doing and focussed on ground-based objectives. The Soviet commanders failed to take advantage of the many opportunities that were presented to them in their orders command environment. One example was their failure to exploit the collapse of the Allied armies by quickly closing the Rostov gap at the opening of their offensive to trap the majority of German forces in the south. While their flanks may have been exposed during this operation, the condition of the German forces at the time was in no way prepared to effectively deal

with such a crisis.⁴¹ The ponderous and reckless Soviet advance was unable to achieve a speedy and successful conclusion to their campaign and, instead, set the conditions for their own defeat.

AGILITY—ACTING QUICKER THAN THE ENEMY CAN REACT

Agility is the speed at which forces can be gathered and committed to decisive spots against a weaker enemy. As Manstein writes:

The constantly decisive factor in any shift of forces, however, is which of the two opponents gains the lead—in other words, which of them is offered the opportunity, by his own timely action, to seize the initiative at the crucial spot and thereafter to dictate his own terms to the more slow-moving enemy, even when the latter is collectively the stronger.⁴²

With the exception of Stalingrad, the Soviet command never managed to co-ordinate strength and speed when hitting a decisive spot.⁴³

German agility and the tempo of their attacks, however, often rendered Soviet decisions irrelevant. The Soviet method of orders control led to a diminished ability to react to German moves. Even while the German counterstroke was underway, Vatutin and the STAVKA were convinced that the Germans were still withdrawing beyond the Dnieper River and issued orders based on this “fact.”⁴⁴ Once the link-up with the SS Panzer Corps was achieved on February 24th, the German forces rapidly exploited the situation by moving to the north. Vatutin finally accepted the situation on February 25th with a report to the STAVKA, and he ordered his units to defend.⁴⁵ By then it was too late. Manstein possessed the initiative, and Soviet units waited for orders that had little to do with the situation at hand.

AVOID SET RULES AND PATTERNS

The Soviet success at Stalingrad combined with the withdrawal of German forces, which was not normal,

led the STAVKA to believe that the Germans were retreating beyond the Dnieper River:

If the Red Army could keep up the pressure until the thaw (went the STAVKA calculation), then, in that quiet period, the Germans would straighten out their line according to the normal dictates of military prudence and the many Soviet salients won in the last weeks would merge into a spectacular territorial gain. Manstein’s remarkable coolness in thinning out his front to well past the accepted danger limit, in order to conserve his remaining armour, was something [for] which no allowance had been made.⁴⁶

COMMAND FROM THE FRONT

The placement of the commander is only relevant when acting in concert with the other fundamentals of manoeuvre warfare. The fundamental, “Command from the front,” is modified by the statement, “Commanders place themselves where they can influence the main effort.”⁴⁷ Manstein accomplished this by moving his headquarters from Novo Cherkask to Stalino and, finally, to Zaporozhye, specifically stating that his move to the latter headquarters was based on the desire to have “the best possible control of the battle at what would shortly become the decisive spot.”⁴⁸ In contrast, the placement of the Soviet commander was completely irrelevant when operating in the vacuum of orders command. Despite clear evidence of the threat to their flank, Soviet commanders were ordered to press on with their advance.⁴⁹ Ultimately, the placement of headquarters is only useful if the commander is allowed to exercise any influence and use his initiative. Without that freedom, as the Soviet example demonstrated, the headquarters merely becomes a post office.

CONCLUSION

Manstein’s counterstroke, against overwhelming odds, demonstrates through the illustrative value of the

fundamentals of manoeuvre warfare, his mastery of the operational level of war. Given a desperate situation and appalling losses, he was able to bring defeat underfoot. With a freedom of action rarely gained or given by the German High Command, Manstein was able to adjust his forces into a strong defence, shape the Soviet penetration and deliver a crushing blow in order to restore the front line situation in the south. As Liddell Hart wrote:

That counterstroke was the most brilliant operational performance of Manstein’s career, and one of the most masterly in the whole course of military history. His detailed account of the operation is likely to be studied, for its instructional value, so long as military studies continue.

To this end, there is much further scope to examine this operation through the six combat functions, particularly Sustainment and Information Operations.

Manstein’s ability to generate decisive combat power at the right time and place, against a critical weak point of the enemy (both physical and psychological), to shatter their morale and cohesion is the essence of manoeuvre warfare. The lessons and examples from this campaign clearly demonstrate the value of the manoeuvrist approach to warfare and that the essential element in victory is how a force is commanded. For the technologists and futurists, it is indeed a lesson worth noting and remembering.



ABOUT THE AUTHOR...

Major Steve Kooistra is an Infantry officer in The Royal Canadian Regiment. He is a graduate from Royal Roads Military College with a degree in Military and Strategic Studies. Major Kooistra's service includes various appointments with the 2nd Battalion, The Royal Canadian Regiment, Basic Officer Training, the CF Leadership Academy, the School of Infantry, and Combat Training Centre Headquarters. Major Kooistra is a graduate from the Canadian Land Forces Command and Staff College and is currently serving with the 3rd Battalion, the Royal Canadian Regiment.

ENDNOTES

1. Field Marshall Eric von Manstein, *Lost Victories* (London: Methuen & Co. Ltd., 1958), pp. 298, 391, 430, 434. The campaign map is a simplified composite of the detailed maps shown in Mainstein's autobiography.
2. Tony Foster, *Meeting of Generals* (Toronto: Methuen, 1986), p.256.
3. R.T. Paget, *Manstein: His Campaigns and his Trial* (London: Collins, 1951), p. 49; von Manstein, pp. 369, 379.
4. STAVKA: Soviet Supreme High Command.
5. David M. Glantz, *From the Don to the Dnepr: Soviet Offensive Operations, December 1942 – August 1943* (London: Frank Cass & Co. Ltd., 1990) p. 84.
6. Christian P. Potholm, *Strategy and Conflict: The Search for Historical Malleability* (Washington: University Press of America, 1979), p. 88. The German sources typically place the odds at 8:1, while Soviet sources have a start state between 4:1 and 2:1. Potholm's analysis provides a more balanced view of the entire operation and its significance, hence the more conservative physical estimate of strength.
7. Von Manstein, p. 372.
8. The remainder of Army Group A withdrew into the Kuban bridgehead south of the Sea of Asov.
9. Von Manstein, pp. 421-423. The SS Corps broke out of Kharkov on February 15th and was under Army Group B command at that time. Shortly after their break, they came under Manstein's command around February 19th.
10. Allen Clark, *Barbarossa: The Russian-German Conflict 1941-1945* (New York: William Morrow & Co., 1965), pp. 300-301. Hitler, after the fall of Kharkov, was furious and, on February 17th, had flown to Manstein's headquarters in Zaporozhye to demand the immediate recapture of that city and for Manstein to halt any further retreats. Over two days of discussions, Manstein convinced Hitler to accept his plan and gained confirmation of command over the SS Corps. On Hitler's last day at Zaporozhye, Soviet tanks were almost in gun range of the airfield and were running out of gas.
11. Von Manstein, p. 436.
12. John Erickson, *The Road to Berlin* (Boulder, Colorado: Westview Press, 1983), p. 63.
13. Von Manstein, p. 433 and Erickson, p. 409. The 615 tanks represent nearly all of Vatutin's tanks, including reserves sent to him. The German estimates of Soviet losses after February 1st are:
Destroyed: 1 Tank Corps, 3 Tank Brigades, 2 Infantry Divisions, 2 Infantry Brigades.
Smashed: 3 Tank Corps, 10 Tank Brigades, 1 Infantry Division, 4 Infantry Brigades.
Heavily Damaged: 2 Tank Corps, 6 Tank Brigades, 6 Infantry Divisions, 3 Infantry Brigades.
14. B-GL-300-002/FP-000 *Land Force Tactical Doctrine*, Vol. 2 1997-05-06 pp. 1-9 to 1-11. The fundamental "Support manoeuvre with firepower" is beyond the scope of this paper and not examined. One would be better served to examine this campaign through the six combat functions—Command, Information Operations, Manoeuvre, Firepower, Sustainment and Protection.
15. Paget, p. 49
16. Major General F.W. von Mellenthin, *Panzer Battles 1939 – 1945* (London: Cassell & Co. Ltd., 1955), p. 205.
17. I have used the terms "mission command" and "orders command" for the purpose of simplicity. "Masters of mission command" is perhaps a misnomer. The Germans used *auftragstaktik* and *befehlstaktik*, both of which have their own peculiar connotations and are loosely translated into "mission command" and "orders command," respectively. In fact, Manstein does not use any of these terms. What he does state is that the "German method (of leadership) is really rooted in the German character, which—contrary to all the nonsense talked about 'blind obedience'—has a strong streak of individuality and—possibly as part of it's Germanic heritage—finds a certain pleasure in taking risks" (von Manstein, p. 383). Therefore, our present understanding of mission command is different from the German concept, which is more than any format or technique, but invariably the result of their culture and heritage.
18. Von Mellenthin, p. 204.
19. Von Manstein, pp. 383-4.
20. Von Manstein, p. 384.
21. Von Manstein, p. 379. On the tasks given, Manstein writes, "Instead of acting as the situation really demanded and radically shifting the main point of effort to its western wing to remove the danger of being cut off, the Army Group as compelled, in the face of a mounting crisis, to fight for time . . . In the large bend of the Don and forwards of the Donets, it was the job of Army Detachment Hollidt to retard the enemy's advance north of the Lower Don to such an extent that he could not cut off the Fourth Panzer Army, and with it Army Group A, by a swift thrust on Rostov from the east. In addition, it had to prevent the enemy from crossing the Donets line Forchstadt-Kamensk-Voroshilovgrad and thereby deny him access to Rostov from the north."
22. Von Manstein, p. 382.
23. Von Mellenthin, p. 204.
24. *Ibid.*
25. Von Manstein, p. 383.
26. Von Manstein, p. 436.
27. Glantz, p. 91.
28. Paget, p. 54.
29. Paget, p. 52.
30. Glantz, p. 120.
31. B-GL-300-001/FP-000, *Operational Land Doctrine for the Canadian Army*, Vol.1, 1998-07-01, p. 27. "Designation of a main effort is a clear and simple method of enabling the commander to direct the desired weight of his combat power to one purpose. The main effort is the activity that the commander considers crucial to the success of his mission at that time. By focussing his efforts to strike hard at one of the enemy's weak points, it can overthrow an opponent who may be, in total strength, more powerful... The statement of main effort allows a subordinate commander to focus his actions on the commander's aim, while giving him flexibility in achieving it. It is not a point on a map. The main effort is the activity the commander wants to use to achieve a decision. It should be qualified by location, time and the force(s) directly involved. For ease of comprehension, the designated force is referred to as being "on the main effort." Designation of the main effort helps to ensure that in the absence of detailed orders commanders can still act decisively within the framework of the higher commander's intent, while clearly understanding the priority of effort."
32. Von Manstein, p. 379.
33. Von Manstein, p. 428.
34. Glantz, p. 368.
35. Glantz, p. 148 and Erickson, p. 53. On February 24th, many Soviet units were "stuck fast for lack of fuel." The issue of sustainment played a critical role in the Soviet defeat. The Soviets were used to falling back on their own lines. When advancing, their logistic problems became acute without adequate lines of communication, particularly railroads, to sustain their offensive.
36. Glantz, pp. 97-8.
37. Von Manstein, p. 419.
38. Von Manstein, p. 374.
39. Von Manstein, p. 409.
40. Von Manstein, p. 431.
41. Von Manstein, pp. 440-1.
42. Von Manstein, p. 410.
43. Von Manstein, p. 440.
44. Glantz, pp. 120-1.
45. Erickson, p. 53.

46. Clark, p. 304.
47. B-GL-300-002/FP-000 *Land Force Tactical Doctrine*, Vol. 2 1997-05-06, pp. 1-11.
48. Von Manstein, pp. 299, 421.
49. Erickson, p. 50.

BIBLIOGRAPHY

B-GL-300-001/FP-000 *Operational Land Doctrine for the Canadian Army*, Vol. 1, 1998-07-01.

B-GL-300-002/FP-000 *Land Force Tactical Doctrine*, Vol. 2, 1997-05-16.

Clark, Allen. *Barbarossa: The Russian German Conflict 1941-1945*. New York: William Morrow and Company, 1965.

Erickson, John. *The Road to Berlin*. Boulder, Colorado: Westview Press, 1983.

Foster, Tony. *Meeting of Generals*. Toronto: Methuen, 1986.

Glantz, David M. *From the Don to the Dnepr: Soviet Offensive Operations December 1942 – August 1943*. London: Frank Cass and Company Ltd, 1991.

Paget, R.T. *Manstein: His Campaigns and his Trial*. London: Collins, 1951.

Potholm, Christian P. *Strategy and Conflict: The Search for Historical Malleability*. Washington: University Press of America, 1979.

Von Manstein, Field Marshall Eric. *Lost Victories*. London: Methuen and Co. Ltd, 1958.

Von Mellenthin, Major General F.W. *Panzer Battles 1939 – 1945*. London: Cassell & Company Ltd, 1955.



Sergeant Laura Cunningham receives the Chief of the Land Staff Commendation from Lieutenant-General Mike Jeffery, Chief of the Land Staff, in June 2001. The commendation acknowledged Sergeant Cunningham's efforts in preparing *The Army Doctrine and Training Bulletin* for publication and in the general preparation of Army Manuals. Her efforts have contributed to the success of *The Army Doctrine and Training Bulletin*. Congratulations Sergeant Cunningham!

Professionalism Under Fire

Canadian Implementation of the Medak Pocket Agreement, Croatia 1993

by Lee Windsor

For many Canadians, the Somalia Affair became a symbol of their armed forces in the 1990s. Intense media coverage of a Somali teen's murder by Canadian paratroopers, its cover-up by senior bureaucrats and officers at National Defence Headquarters, and a series of subsequent scandals shook public confidence in the nation's military institutions. Negative coverage, particularly in the first half of the 1990s, created an image of military incompetence and unprofessionalism, vividly captured in letters to the editors of major newspapers across the country. In recent years that image was balanced with more positive ones of Canadian Forces personnel protecting the peace in the Former Yugoslavia, Africa, and East Timor. Nevertheless, the spectre of Somalia still lingers in the minds of many people, both in and out of uniform.

The strong presence of Somalia in the national collective memory is perhaps partly a result of the Report of the Commission of Inquiry into the Canadian deployment to East Africa, revealingly titled *Dishonoured Legacy: The Lessons of the Somalia Affair*. This report is one of the few publicly accessible, quasi-scholarly accounts of a Canadian military operation in the last decade which is based on an allegedly full appreciation of primary sources. Essentially, the report represents a first draft of Canadian military history since the end of the Cold War.

Composed by a commission of two jurists and a senior journalist, the report lent credibility to public perceptions that the Canadian Forces in the 1990s were deficient and in danger of collapse. The commissioners claimed that during Operation "Deliverance" (the mission to Somalia) "systems broke

down and organizational discipline crumbled" within the Canadian Airborne Regiment Battle Group, and that "planning, training, and overall preparations fell far short of what was required. We can only hope that Somalia represents the nadir of the fortunes of the Canadian Forces. There seems to be little room to slide lower."¹ The report implies that Canada's military personnel were poorly trained, incompetently led, badly equipped, and quite often racist. *Dishonoured Legacy* is especially influential as an historical text since it passes criticism of the Somalia operation to all of Canada's military institutions based on an admittedly incomplete investigation of criminal activity and cover-up during the mission of one battle group on a foreign deployment.

In fact, Operation "Deliverance" was only one of dozens of missions carried out by Canadian soldiers, sailors, and aircrew during the past decade. Before accepting the commission's condemnation of the professionalism and leadership of the armed forces, and of the army in particular, it would be useful to scrutinize other military activity during the same period. The Balkans are a good place to start. Indeed, Canadian experience in the Former Yugoslavia is more representative of the nation's military experience in the 1990s than the rather unusual case of Somalia.

Since 1992, tens of thousands of Canadian military and naval personnel have endeavoured to restore peace to the Balkans. They have acted as peacekeepers, negotiators, aid workers, and quite often as combat soldiers. Initial examination of a number of Canadian missions to the region in 1992-94, including those at Sarajevo, Srebrenica, and the Medak Pocket,

seem to contrast with the Somalia Commission's findings about poor leadership and training. What follows is a closer investigation of Canadian efforts to implement the Medak Pocket Agreement in 1993 to determine if the nation's armed forces were truly at their "nadir" during the fateful year of the Somalia scandal.

In mid-September 1993, United Nations Protection Force (UNPROFOR) soldiers from 2nd Battalion, Princess Patricia's Canadian Light Infantry (2 PPCLI) advanced into the disputed Medak Pocket in southern Croatia with orders to implement the latest cease-fire between Croatian Army troops and Serb irregular forces. 2 PPCLI was reinforced with two mechanized companies of French troops. The Canadians, well schooled in the delicate art of "peacekeeping", discovered their negotiation skills and strict impartiality were not immediately required in the Medak Pocket. Instead, they found themselves calling upon their primary war-fighting skills when Croatian Army units opened fire with machine-guns, mortars and artillery in an effort to stop the Canadian advance. To complete their assigned mission, the Patricias were required to threaten the use of, and ultimately use, deadly force against Croatian units. However, the true test of military professionalism and discipline came after the smoke cleared, when the Croatians backed down, and the Canadians immediately reverted to their role as impartial peacekeepers in their dealings with individuals who only moments before had attempted to kill them.

Resolute Canadian and French action came at a time when the UN reputation in Croatia was at a low ebb due to repeated failures to secure the infamous United Nations

Protected Areas (UNPAs). Colonel George Oehring, commander of UNPROFOR Sector South, claimed the Princess Patricia's "won for the whole mission a credibility and respect that will be long remembered by the opposing parties and much facilitate our future efforts here."² For its efforts, 2 PPCLI was awarded a United Nations Force Commander's Commendation from French General Cot, the first of its kind and one of only three awarded in UNPROFOR's history.

Of course, the Canadians originally went to the Former Republic of Yugoslavia to protect a fragile truce, not to impose peace on warring factions locked in a bloody civil war. Until the early 1990s Yugoslavia was a federation of six republics including Croatia, Serbia, Montenegro, Slovenia, Bosnia-Herzegovina and Macedonia, all quite similar in language, culture and custom. Despite the presence of ultra-nationalist movements in each republic, the Yugoslav federation existed harmoniously earning international acclaim and the privilege of hosting the world at the 1984 Winter Olympics.

The collapse of centralized communist authority in Yugoslavia during the late 1980s brought nationalists in each republic into mainstream politics. In Serbia, Slobodan Milosevic and in Croatia, Franjo Tudjman, rose to power by destroying the carefully constructed Yugoslav identity in favour of a new nationhood based on blood and religion. In the process, Serbia, the most powerful of the six republics, attempted to take control over the crumbling federation. This did not appeal to growing nationalist movements in Croatia and Slovenia, resulting in declarations of independence in 1991, followed closely by a similar move in Bosnia. Croatia and Bosnia contained large numbers of ethnic Serbs, hostile to the federal break-up. Croatian and Bosnian Serbs established paramilitary forces to resist their respective new governments, leading to two distinctly separate civil wars.

During the opening months of these wars, the Yugoslav National Army (JNA), on orders from

Belgrade, openly intervened to prevent the break-up of the federation. JNA involvement usually meant assisting Serb militias in Croatia and Bosnia. However, the regular army was a mirror of the old federation and thus suffered from the same problems of divided loyalties. Non-Serb officers and senior Non-Commissioned Officers (NCOs) left the JNA to join the new national armies of their home republics. This exodus of non-Serbs destroyed cohesion in the JNA, thus eliminating the only modern professional military force in Yugoslavia. With no army left to implement its goals and an economy on the verge of collapse, Serbia gradually withdrew from conflicts in Croatia and Bosnia, leaving Serb minorities there to fend for themselves against the newly created Bosnian and Croatian armies. Serb militias acquired weapons, vehicles, and even volunteers from the JNA as it withdrew, while newly created Croatian and Bosnian forces received equipment from outside sources like Germany and the United States. However, equipment alone does not build an army. It would take years before the various militias and armed gangs would coalesce into professional military forces.

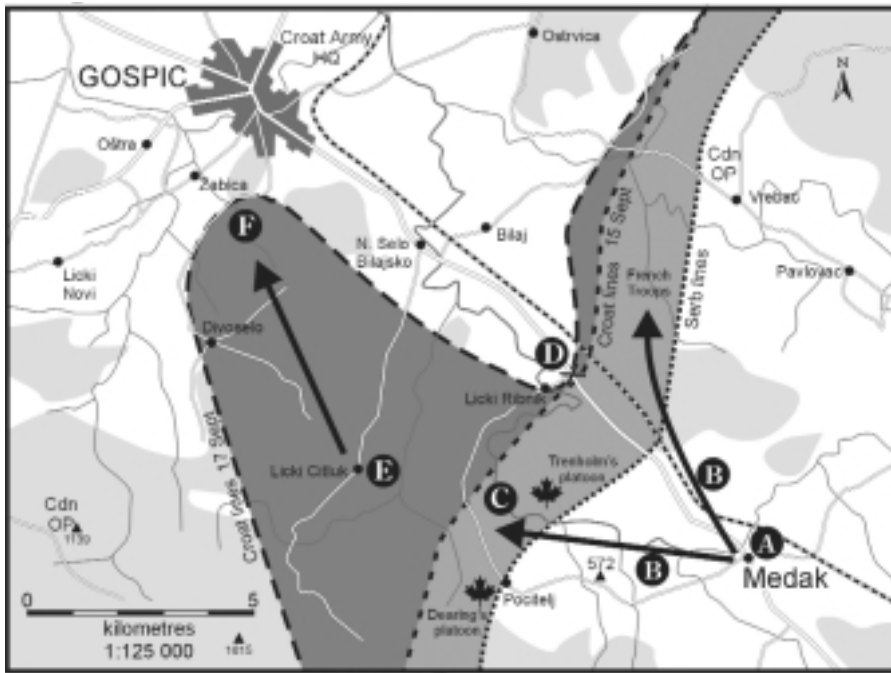
For most of the period between 1992-95, the Yugoslav wars of succession were waged by amateurs. When the JNA was removed from the equation, they took with them the normal codes of conduct held by modern professional military officers. Rival militias fired weapons in the vicinity of opposing troops, more often than not, intent on killing civilians. The result was to create a pattern of combat where military casualties were few. The new armies knew how to kill, but not how to wage war against other soldiers properly. Unprotected civilians were a different matter. And so, the objective in these wars was not to defeat the opponent's combat power but to consolidate new ethnic nation-states by killing or driving out those who did not fit.³

The United Nations Protection Force (UNPROFOR) entered this storm in 1992, first in Croatia and

later in Bosnia. In Croatia, the UN brokered a cease-fire between the new Croatian government in Zagreb and minority Serbs who sought independence from the new state. The peace agreement included establishment of a UN patrolled buffer zone under Chapter VI of the UN Charter.⁴ Both parties welcomed the cease fire, when in fact it held, as an opportunity to build their military capabilities until such time as victory could be assured. This was the environment faced by Canadian soldiers making up UNPROFOR's Canadian Battalion Number 1 (CANBAT 1) in 1993.

The second rotation of CANBAT 1 was based on the "Regular Force" 2nd Battalion of Princess Patricia's Canadian Light Infantry. However, of the 875 soldiers making up the battle group, only 375 actually came from that unit. One hundred and sixty five came from other Regular Force units and assignments. The remainder consisted of 385 Reserve soldiers who had volunteered from militia units across Canada. Due to the requirement for highly skilled and experienced regular soldiers in support and technical trade positions within the battle group, and the overall shortage of combat infantry soldiers in the Canadian Army, the majority of those reservists served in the rifle companies. In fact, Reserve soldiers made up 70 per cent of rifle company strength during the mission. This includes seven out of the 12 platoon commanders who came from militia battalions as Reserve Entry Scheme Officers (RESO).⁵

Reserve augmentation was not new in the Canadian Army. For decades, under-strength regular battalions had their ranks filled out with reservists before deploying to Cyprus. Indeed, after much debate in the Canadian defence community, providing regular unit augmentation with individual soldiers became a primary role for reserve regiments in the 1990s. Augmentation was particularly vital during the time of immediate post-Cold War conflict proliferation, a corresponding spike in the number and intensity of



- Ⓐ 9 Sept - Canadian Platoon House takes 525 shells in 24 hours
- Ⓑ 15 Sept - Canadian and French troops move between Croat and Serb lines
- Ⓒ 15-16 Sept - Battle, 1330 hours to 0900 hours
- Ⓓ 16 Sept - Croats block Canadian advance
- Ⓔ 16 Sept - Canadians move into villages, find evidence of ethnic cleansing
- Ⓕ 17 Sept - Canadian and French troops move Croats back

Operations in the Medak Pocket

peacekeeping missions combined with shrinking personnel pools and budgets. This was especially true in 1993 when the army, now known as Land Forces Command, was stretched nearly beyond its means. At the time, it was providing two battle groups to the Former Yugoslavia (the other in Bosnia), one to Somalia and a number of other units, detachments and individual soldiers to a myriad of missions around the world. Nevertheless the 2 PPCLI Battle Group in Croatia contained the highest concentration of Reserve soldiers on an operational mission to date. The standard of Militia performance in a tense and demanding theatre like Croatia, remained to be seen.

The 2 PPCLI Battle Group spent the first three months of 1993 conducting preparation training, first in Winnipeg, and later in Fort Ord, California. Much of this time was spent working the large Reserve compliment up to basic Regular Force standards for section and platoon battle-drills. There was no time to properly exercise companies, let

alone the whole battalion.⁶ Besides, section and platoon skills were generally all that was required of soldiers manning observation posts on UN peacekeeping duty. No one could know that the 2 PPCLI platoons would be called upon to gel together and go into action as a full battalion.

2 PPCLI moved to Croatia at the end of March 1993, replacing 3 PPCLI on what Land Forces Command referred to as Operation "Harmony". At that time, UNPROFOR's CANBAT 1 was responsible for a UN Protected Area in Sector West, in the northwestern corner of Croatia. It was there that Lieutenant-Colonel James Calvin, commanding the 2 PPCLI Battle Group, and his troops developed a reputation among the warring parties and their fellow UN contingents for being fair, but tough.

Unlike units from most other international contingents, Canadian battalions operated with their full compliment of war-fighting weaponry and equipment. Rifle companies travelled in M-113 Armoured Personnel Carriers (APCs) configured in an

American armoured cavalry fashion with an armoured cupola offering some protection for crewmen manning the powerful Browning .50 calibre machine-gun. The companies also carried along with them C-6 medium machine-guns and 84 mm Carl Gustav anti-tank rocket launchers to add to platoon weaponry consisting of C-7 automatic rifles and C-9 light machine-guns.

Rifle company firepower was amplified by the heavy weapons of Support Company, including 81mm mortars and Tube-launched, Optically-tracked, Wire-guided (TOW) anti-armour guided missiles mounted in armoured turrets aboard purpose-built APCs.⁷ Canada was among the first member nations to deploy blue-helmeted soldiers with this kind of firepower when UNPROFOR first deployed to Croatia in 1992. This sort of stance was not initially well received in UN Headquarters in New York, where the traditional notion of lightly armed blue-bereted peacekeepers prevailed.⁸ However, by 1993, the value of well-armed forces in the Former Yugoslavia, where the consent of the warring parties was not always apparent, was well understood.

Once on the ground, 2 PPCLI earned their tough reputation not only with their equipment, but also by their demonstrated willingness to use it. Not long after their arrival, the battalion conducted a major defensive exercise in the sector. The exercise was intended partially to complete the battle group's collective training and improve force cohesion, but also to demonstrate to the Croats that an attack into the UN Protected Area in Sector West would and could be resisted by the UN.

The Patricias vigorously enforced weapon bans in their area of operations, seizing contra-band arms of all types from both warring factions. Colonel Calvin also, on his own initiative, developed a procedure to deter Croat and Serb patrolling and raiding within the Protected Area. Previously, belligerent soldiers detained by the UN after engaging in such activity would be returned to

their own authorities for punishment. Calvin began releasing detainees to the opposing forces with UN civilian police keeping a close eye to ensure punishment was not “terminal.”⁹

After five months of in-theatre training coupled with hands-on practice, the 2 PPCLI Battle Group became one of the most effective and respected units in all of UNPROFOR. It was for that reason that the new Force Commander, French Army General Cot, selected them to move to Sector South to undertake one of the more difficult assignments in United Nations peacekeeping history.

Unlike 2 PPCLI's relatively tranquil former area of responsibility, Sector South was still a war zone. It was here that Croatian Serbs most fiercely resisted the notion of living under Zagreb's rule. Croatian and Serb troops routinely exchanged small arms, mortar and artillery fire all over the area. This steady exchange of fire was punctuated in 1993 by several major Croatian offensives, including Operation “Maslencia” in January. At Maslencia, French troops guarding the UN Protected Area were forced to abandon their positions when faced with heavy Croatian fire. The French withdrawal allowed advancing Croatian units to occupy the supposedly demilitarized buffer zone. This event destroyed Serb confidence in the force mandated to protect them. It also taught the Croatians that a few well directed bullets and shells would send the blue-helmets packing anytime they wished to remove prying UN eyes.¹⁰

Nonetheless, by summer of 1993, the international community had pressured both sides into a new cease-fire in Sector South known as the Erdut Agreement. Under the terms of this agreement, Croatian forces would withdraw from many of the territories gained in the Maslencia offensive. The Canadian battle group, reinforced with two mechanized French companies brought in from Bosnia and northern Croatia, was ordered to ensure that Croatia followed through with the agreement.

General Cot anticipated that Croatian troops would be reluctant to withdraw from their hard-won gains. This is why he chose the well-armed and highly effective CANBAT 1 to implement the agreement and restore UN presence in Sector South. Cot expected and even hoped for trouble as he was looking for an opportunity to win back UN credibility lost in January.¹¹ He would get his wish.

While Cot expected trouble, he may not have been aware of the extent to which Croatian forces used the Erdut negotiations to shield preparations for a renewed offensive in Sector South. On 9 September, as lead UN elements moved into the village of Medak, the Croatian 9th “Lika Wolves” Guards Brigade commenced its assault on the salient section of the front known as the Medak Pocket. Intelligence assessments later indicated that the Croats were most likely attempting to push back the frontline so that their operational zone headquarters in the town of Gospic would be out of range from Serb gunners located in the long narrow Medak salient.¹² They may also have intended to drive a corridor to the Dalmatian coast, or draw attention away from domestic political controversies back in Zagreb.

The Lika Wolves Guards Brigade were well supported with tanks and artillery, including a squadron of former East German Army T-72s as well as older model Warsaw Pact armour. However, while the Croat force contained all the trappings of a modern mechanized army, it applied its combat power in very rudimentary fashion. Artillery was used to lay down a simple creeping barrage while the infantry and armour advanced without any degree of co-ordination. As Croat armour pushed down the main road along the valley between Gospic and Gracac, a Croat light infantry force operating in the mountains to the south moved to close off the Medak Pocket from the opposite direction. The even more poorly organized and equipped Serb defence collapsed under the crude, but effective Croat onslaught.¹³

The Croat preliminary barrage on Serb defences in the Medak Pocket commenced as lead elements of 2 PPCLI were moving up to the front, through the Serb rear area, in preparation to implement the Erdut agreement. The outbreak of heavy fighting required a rapid and dramatic adjustment to Canadian plans. Trained to react quickly to unexpected developments on a fast-moving battlefield, the Patricias easily managed the adjustment. Forward platoons immediately commenced construction of fortifications to protect against the bombardment. The well-drilled Patricias took advantage of every lull in the barrage to further sandbag andrevet positions. Over 500 mortar, field and medium shells fell in an area the size of Parliament Hill around Lieutenant Tyrone Green's 9 Platoon from Charlie Company within the village of Medak itself. This did not deter Green and his men from carrying out their newly assigned tasks of gathering intelligence on the developing battle and recording cease-fire violations. It is a tribute to their high-intensity war fighting skills, including a thorough appreciation of the effects of artillery, that only four Canadians were wounded during the shelling.¹⁴ If the Croats expected their barrage on Serb defences would also drive off the UN, they were wrong.

Serb reinforcements poured into the Medak Pocket from all over Yugoslavia and in two days managed to stop the Croatian advance cold, but not before the ten kilometre long and five kilometre wide salient had been pinched out and the front line straightened, roughly 3 000 metres northwest of Medak. Fighting raged on in a bitter stalemate for two more days until Serb artillery opened fire on the Croatian city of Karlovac, and then launched a FROG long-range missile into a Zagreb suburb. Serb retaliation coupled with growing pressure from the international community was enough to convince President Tudjman to abandon the offensive and withdraw his forces to their pre-9 September startline.¹⁵ A verbal agreement to that effect was

signed into the “Medak Pocket Agreement” on 13 September. It would be up to the reinforced Canadian battle group to ensure all parties complied with the new terms.

Up to this point, 2 PPCLI had been passive—if direct—participants in the Medak Pocket action. However, that soon changed. At 1630h on 14 September, 1993, Lieutenant-Colonel Calvin held an Orders Group (“O” Group) with his subordinate officers and NCOs to review plans for the coming operation. The new withdrawal agreement was to be implemented in four phases. 2 PPCLI’s Charlie Company and one French company would make the first step of occupying Serbian frontline positions on 15 September. Phase 2 would see Charlie Company, under the watchful eyes of the anti-armour platoon, establish a crossing point in the no-man’s land between the opposing armies on the main paved road running the length of the valley floor. In phase 3, Delta Company and the second French Company from FREBAT 3 would move along the road, through the secure crossing point and on to occupy the forward Croatian positions. 2 PPCLI’s Reconnaissance Platoon and the battalion tactical headquarters would follow Delta Company into the pocket. The last step would be to oversee the Croatian withdrawal to their pre-9 September positions, thereby completing the separation of forces and establishing a new demilitarized zone. The Patricia’s Alpha and Bravo Companies, which had only just arrived in the area from Sector West, would secure the remainder of the CANBAT 1’s area of responsibility during the operation. Unfortunately, the Canadians would have to do without its 81 mm mortar platoon. Since the unit was due to rotate home in only a few weeks, the tubes had already been shipped back to Canada.¹⁶

In the hours prior to the operation, General Cot personally flew into the area to speak to Colonel Calvin, essentially taking overall command of the operation and eliminating the link to Sector South Headquarters in Knin. Too much was riding on the coming events to have

any delay in the reporting chain or any misunderstanding about what was to happen. The Force commander reminded Calvin of how vital it was that his battle group succeed in order to restore UN credibility. Cot also indicated that details of the Medak Pocket Agreement had not likely made it from Zagreb down to the frontline Croatian soldiers that would be soon encountered. General Cot strongly implied that force may have to be used to ensure their compliance with the agreement. He reminded Calvin that the UN rules of engagement allowed the blue-helmeted Canadian and French troops to return fire in kind if they or their mandate were threatened.¹⁷ The mission was clear and the stage set.

The M-113 Armoured Personnel Carriers of Charlie Company rolled forward on 15 September on schedule. Not long after setting off, Lieutenant Green’s 9 Platoon came under small arms and machine gun fire from the Croatian lines. At first it appeared that General Cot was right about the Croat frontline units not being advised that the Canadians were coming. The solution to this problem seemed obvious. Get the white painted armoured vehicles out in the open where there would be no mistake that it was UNPROFOR advancing, rather than a Serb counterattack.

Large blue UN flags were fixed to radio antennae and the carriers driven out of a tree line into the open. This brought an increase in Croat fire, including heavy machine gun, rocket-propelled grenades, and 20 mm anti-aircraft gunfire. It was now obvious that the Croatians had no intention of letting the Canadians advance. All along the Charlie and FREBAT 3 Company front, the blue helmets halted in whatever defensive positions they could find, roughly along the former Serb line. For the next 15 hours, the Croatians shot it out with Canadian and French troops.¹⁸ Interestingly enough, of all the weapons used against the advancing UN troops, the deadly T-72s known to be in the area did not make an appearance. Perhaps Croat

officers were aware of the potency of the TOW anti-armour missile system, especially when manned by Canadian crews, and were unwilling to risk their precious new vehicles.

It was not exactly a battle, at least not by the standards of western armies where positions are attacked with fire and movement. There were no infantry assaults or sweeping tank thrusts to seize ground held by the UN. That is not how war was waged in the Balkans. Ground combat in the Former Yugoslavia consisted of both sides attempting to make opposing positions untenable by bringing maximum fire to bear. Conversely, as soon as a position became too dangerous due to accurate and sustained fire, it was abandoned. Any movement that involved placing troops in the open was avoided. Weapons were plentiful in the region but soldiers, especially of the trained variety, were not. This way of war may also be a vestige of Tito’s guerilla military doctrine that formed the basis of the old Yugoslav National Army in which many of the officers and NCOs on both sides had served.

The argument then is that by Balkan definition, the Croat firefight with Canadian and French soldiers was indeed a battle. It surely seemed that way to Sergeant Rod Dearing’s section of 2 PPCLI’s 7 Platoon on Charlie Company’s left near the village of Licki Citluk. It was there that some of the heaviest firing took place, often at ranges of 150 metres. At one point in the evening, Croat mortars and 20 mm autocannons went to work on the Canadian trench line. Croat infantry tried repeatedly to flank Dearing’s section, but each time they were driven off by Canadian rifle and machine-gun fire directed by a Starlight telescopic night vision sight.¹⁹ In the early hours of 16 September, when Croat troops made one last attempt to push out the Patricias, Private Scott LeBlanc leapt out of his trench blazing away at the attackers with his belt-fed C-9 light machine-gun. Leblanc’s audacious act was apparently enough to convince the Croats that these Canadians were not about to give ground and that it

was time to pull back.²⁰ Regardless of how this action compares to other larger battles in Canadian military history, for the riflemen of Charlie Company, it was war. Five of Dearing's men were reservists, including LeBlanc.

Over on the UNPROFOR right, the French Company was having better luck. Each of their mechanized platoons was equipped with one VAB infantry fighting vehicle mounting a 20mm autocannon in an armoured turret. When hostile fire was returned with this powerful and accurate weapon, Croat troops were less inclined to offer resistance.²¹

The firefights lasted all night and early into the next morning. During the night, Colonel J.O.M. "Mike" Maisonneuve, UNPROFOR's Chief Operations Officer, arrived from Zagreb in an effort to talk down the Croatians. Eventually, Maisonneuve, Lieutenant-Colonel Calvin, and a senior UN Military Observer drove down the main road to meet with the local Croat commander. Operational Zone Commander General Ademi, rough equivalent to a NATO corps commander, agreed to the meeting and let the Canadian delegation pass through the lines to his headquarters in Gospic. After much heated discussion, Ademi agreed to not resist Phase 2 and that the Canadians could establish the crossing point that night without Croatian interference. Phase 3 would commence at 1200h the following day when Delta Company would pass through the crossing point to move into the Croatian trench line.²² During the night, Major Dan Drew and his Delta Company Headquarters moved up the road to the crossing point. The remainder of the company would join him in the morning for their 1200h departure time.

The Patricias rose to a horrifying sight on the morning of 16 September. Smoke could be seen rising from several villages behind Croatian lines. Explosions and an occasional burst of automatic rifle fire could also be heard. It suddenly became clear why the Croatians

resisted the Canadian advance. Those villages were inhabited predominantly by Serbs and Croatian Special Police were not yet finished ethnically cleansing them.

Colonel Calvin clamoured for action and immediately recalled Colonel Maisonneuve to meet again with General Ademi. Unfortunately, with only four widely separated companies and no supporting tanks or artillery, Calvin's force had no chance in a frontal attack against the entire Croatian 9th Brigade which had tanks and heavy guns. Even if the Canadians did have the strength, it would be far beyond the scope of UNPROFOR's mandate to deliver a full attack. Returning aimed fire was one issue, but launching an assault was another. There was little the Canadians could do but sit back and wait for the 1200h timing. As they waited, they listened helplessly to the explosions and shooting and imagined what was happening to the Serb civilians to their front.

Delta Company rolled ahead on schedule at noon mounted in their M-113s and accompanied by several TOW anti-armour vehicles. No sooner had they started down the road in column that they ran into a Croatian roadblock. To the left of the road sat a very modern and very deadly T-72 main battle tank, a gift from Germany. On the right side of the road, two towed anti-tank guns and a bank of Sagger missiles were aimed at the Canadian column. A company of Croatian infantry protected by a hastily laid mine field completed the obstacle.

The senior Croatian officer on the barrier refused Major Drew's demand that his company be allowed to pass. Weapons on both sides were made ready for action. This tense Mexican standoff lasted over an hour. Throughout the standoff, the well trained and highly disciplined Canadian riflemen maintained their cool while the Croats grew increasingly uneasy. Essentially, the resolute and stern-faced Canadians began to stare down the Croatians manning the roadblock.²³

During the tension, Colonel Calvin arrived on the scene. He argued heatedly with the ranking Croat officer, Brigadier General Mezcic.²⁴ Mezcic was General Ademi's senior liaison officer. His presence at the road block indicated that the Operational Zone Commander had no intention of keeping his word. In fact, Mezcic was stalling to give Croatian Special Police the time they needed to destroy evidence of ethnic cleansing.

Shortly after 1300h, Calvin took a gamble to break the deadlock and avoid a bloody point-blank shootout in the middle of the road. Some 20 international journalists had accompanied Delta Company, all seeking to cover the story of Croatia's latest invasion of the Serbian Krajina. It was time to bring them into action. Calvin called the media crews to the front of the column and held a press conference, complete with cameras, in front of the roadblock. He told the reporters what Croatian policemen were doing on the other side of the barricade and had the camera's film the Croatian's obvious interference with the UN's effort to make peace.

The cameras broke the increasingly shaky Croat resolve. By 1330h, Delta Company was on the move. Calvin's imaginative ploy was too late to stop the ethnic cleansing of Serb villages in the Medak Pocket, but it did allow the blue helmets to reach most of the villages before all traces of Croatian atrocities could be erased.²⁵ Unfortunately, the battle group was also held up later in the afternoon by senior UN officials who insisted that they stick to a rigid time table for advancing into the pocket, a timetable that did not take into account that with every wasted minute, more evidence was destroyed. It was not until 17 September that UNPROFOR soldiers occupied the whole area.

The next few days were the most difficult for Canadian soldiers involved in the Medak Pocket operation. Their job was now, along with civilian police officers and UN medical officers, to sweep the area for signs of ethnic cleansing. The task was enormous. Each and every building in the

Medak Pocket had been levelled to the ground. Truckloads of firewood had been brought to start intense fires among the wooden buildings. Brick and concrete buildings were blown apart with explosives and anti-tank mines. The Croats completed their task by killing most of the livestock in the area. That was the small-arms firing heard on 16 September. In addition, oil or dead animals were dumped into wells to make them unusable for Serbs entertaining any thought of return.²⁶

Only 16 Serb bodies were found scattered in hidden locations. The open ground was littered with rubber surgical gloves. Calvin and his men believed the gloves indicated that most Serb dead laying in the open were transported elsewhere and only those hidden in basements or in the woods had been left behind in haste. A mass grave containing over fifty bodies was later located in the vicinity. The bodies recovered included those of two young women found in a basement. They had apparently been tied up, shot and then doused with gasoline and burned. When found, the bodies were still hot enough to melt plastic body bags. At another location, an elderly Serb woman had been found shot four times in the head, execution style.²⁷

While the job of gathering evidence may have been the most difficult for the Canadians, haunting many of the young soldiers to this day, it was of critical importance. The Medak Pocket provided the world with the first hard evidence that Serbia, although probably the largest, was not the sole perpetrator of ethnic cleansing in the Balkans. Also, the meticulous Canadian procedures used to sweep and record evidence in the area became the standard for UNPROFOR, perhaps providing some degree of deterrence to those who may fear being called before a war crimes tribunal.

Canadian action at Medak earned back some of the respect for the United Nations lost at Maslencia. That same month, a Canadian officer,

Colonel George Oehring, took over as commander of Sector South. Oehring was in a better position than anyone to feel the effects of Medak.

Medak restored UNPROFOR's credibility resulting in renewed dialogue leading to a local informal cease-fire in November, a more formal and wider one at Christmas, and a "bilateral", universal cease-fire signed in Zagreb on 29 March, 1994. Everybody hated us in September 1993. I was stoned and threatened during my first trip to Zadar to meet the Croat commander there. Medak changed all this. The Serbs, right up to my departure a year later, would spontaneously mention the resolute fairness of the Canadians at Medak, while the Croats, although grudgingly at first, came to respect the Canadians in Sector South.²⁸

Unfortunately, Medak did not go far enough in wiping away the memory of Maslencia. The Canadians may have documented Croat war crimes, but they could not stop them, adding to the sense of insecurity among the Serbs.²⁹ However, Jim Calvin and his men can take comfort in the knowledge that they did everything within their means to keep order in Croatia. The international peacekeeping community was not yet ready in 1993 to take the kind of resolute steps seen last year in Kosovo. It would take several, much larger massacres around the world before international political will could be mustered to intervene and stop ethnic cleansing.

The joint Canadian-French operation at Medak represents a watershed in the development of international conflict resolution. It will be many years before scholars will be able to fully explain the ongoing transformation in the nature of modern military peace support operations. Sources are not yet available and not enough distance has been established to present a clear, accurate historical picture.

The Medak Pocket Operation also occurred at the beginning of the transition period. The Canadian

battle group possessed a high degree of combat power and a demonstrated willingness to use it. However, most other contingents in UNPROFOR were totally unprepared in regards to equipment, training and political will to engage in the types of action carried out by the Canadians at Medak.

Analysis of activities engaged in by Canadian troops at Medak offers an alternative view to the conclusions of the Somalia Report. Operations in UNPROFOR's Sector South demanded the full range of capabilities possessed by Canadian soldiers, from fortification construction, marksmanship, and mechanized mobile combat, to negotiation and basic investigation techniques. In all of these categories, Canadian military leadership and training was of the highest standard. Contrary to the findings of the Somalia Inquiry, the Canadian Army in 1993 contained dedicated, skilled, and well-disciplined professional soldiers. Competent, educated, and highly capable officers and senior NCOs led these troops.

Medak and Somalia were obviously not the only two Canadian military operations in the last decade. A great deal more research is necessary before a final verdict can be passed on Canadian Forces' effectiveness in the 1990s. One thing is clear, however. An institution capable of producing soldiers who could perform effectively in the difficult and constantly evolving conditions at Medak was probably not as close to collapse as some may think.



ABOUT THE AUTHOR...

Lee Windsor is currently a doctoral candidate in Canadian military history at the University of New Brunswick. He holds a BA from Acadia University and an MA from Wilfrid Laurier. He is a former member of the Canadian Forces Reserve. From 1996-98 he worked as a researcher and assistant co-ordinator for the Conference of Defence Associations Institute.

ENDNOTES

This article is based on research conducted for the Conference of Defence Associations Institute.

1. Commission of Inquiry into the Deployment of Canadian Forces to Somalia, *Dishonoured Legacy: The Lessons of the Somalia Affair* (Ottawa: 1997), p. xxix.
2. Memorandum, Colonel G. Oehring to UNPROFOR Deputy Force Commander Major-General J.A. MacGinnis, 1 October 1993.
3. Overview of Yugoslav break-up based on UN Reports and print media analysis conducted while author served as CF operations analyst for the Conference of Defence Associations Institute, 1996-98. For more information on the topic see: Susan L. Woodward, *Balkan Tragedy: Chaos and Dissolution after the Cold War* (Washington: Brookings Institution, 1995); and *The United Nations and the Situation in the Former Yugoslavia* (New York: UN Dept. of Public Information, 1995).
4. Troops deployed under Chapter VI of the *United Nations Charter* are mandated to impartially support peaceful resolution of disputes between parties, as opposed to deployments under Chapter VII that allows for the use of force to restore international peace and security.
5. Interview with now Colonel J. Calvin, Kingston 1997. Reserve combat arms officers enrolled in the RESO program receive virtually identical training as their Regular Force counterparts up to

platoon/troop command level.

6. Interview with Calvin.
7. War Diary [WD], 2 PPCLI, Operation "Harmony" Rotation 3, Mar-Oct, 1993.
8. Lewis MacKenzie, *Peacekeeper: The Road to Sarajevo* (Vancouver: Douglas & McIntyre, 1993).
9. Major Dawn M. Hewitt, USAF, *From Ottawa to Sarajevo: Canadian Peacekeepers in the Balkans* (Kingston: 1998), pp. 55-57.
10. Interview with Colonel G. Oehring (Retired) (Kingston:1997).
11. Interview with Calvin; Medak Pocket Hearing, Standing Committee on Defence and Veterans Affairs [SCONDVA], 1998.
12. UNPROFOR Intelligence Summary, WD 2 PPCLI, September 1993.
13. Interview with Calvin.
14. SCONDVA Hearing.
15. Colonel J.O. Michel Maisonneuve, "Unity of Action in ex-Yugoslavia," *Defence Associations National Network News* (Winter 1995/96).
16. WD 2 PPCLI, Medak Pocket After Action Report, 1993 Section 5.
17. SCONDVA Hearing.
18. WD 2 PPCLI, Medak Report.
19. Hewitt, *From Ottawa to Sarajevo* p. 64.
20. SCONDVA Hearing.
21. Interview with Calvin.
22. *Ibid.*
23. *Ibid.*
24. WD 2 PPCLI Medak Report.
25. SCONDVA Hearing.
26. WD 2 PPCLI, Medak Report.
27. Interview with Calvin.
28. Letter from Colonel G. Oehring to Minister of National Defence, December 1996.
29. "It was impossible to have any meeting or negotiations with the Serbs without having '22 January, 1993' (Op "Maslencia") discussed ad nauseam." WD 1 PPCLI, End Tour Report Op "Harmony", Rotation 4, October 1994.

Fighting in Built-up Areas

We Can Do This, so Let's Get on With it

by Brigadier-General Glenn Nordick, MSC, CD

In the next 20 years, urban areas will assume greater importance and in some campaigns may become the decisive terrain. Future opponents may choose to fight in urban areas to offset traditional tactical capabilities. Global urbanization is expected to create a more demanding operational environment.

DLSC Report 01/01,
Future Army Capabilities

For over twenty years, I have been struck by the geographical differences that exist between the areas where I have been trained to fight and those where I have actually deployed on operations. With the exception of the Gulf War, my areas of operational UN experience (Cyprus and Croatia) and my Cold War deployments (Germany and Norway) bore little resemblance to the training areas at Gagetown, Wainwright or Suffield. Instead, the terrain has almost inevitably been complex, consisting of large cities, or smaller, almost mutually supporting towns and villages located in forests, mountains, with narrow winding roads and numerous obstacles. Having recently been responsible for the mounting of three NATO peace support missions in the Balkans and the preparation of the Immediate Reaction Task Force (Land) (IRTF[L]) Battalion Group, I see little reason to believe that Canada's future military experiences will be far different than my own.

That said, I have received some excellent training in our training areas and many of the lessons were transferable, regardless of the terrain differences. However, other lessons are not well learned. Complex and urban terrain increase command and control problems, reduce situational

awareness, and give a decided advantage to the defender. Engagement ranges shrink and some traditional technological advantages lose their edge or must be significantly modified to adapt. It is also a fact that in complex terrain armies or nations that are paralysed by casualties will certainly operate at a significant disadvantage. Therefore, in writing doctrine, developing training, and in purchasing equipment for the future army, we must be certain that we are capable of fighting and winning in complex terrain, as it is both the toughest and most likely current and future environment we will have to operate in.

Over the past two years, one of the primary training goals of 1 Canadian Mechanized Brigade Group (1 CMBG) has been to increase our capabilities with regards to fighting in built up areas (FIBUA). Given the operational tempo (Operations Kinetic, Palladium Rotations 6 and 7, IRTF[L]) and the introduction of new equipment (LAV III, Leopard C2 tank and Tactical Command, Control and Communications System [TCCCS]) this has not been easy. However, our experience has shown that it can and must be done.

With the lack of definitive Canadian doctrine in this area, we began with a historical and contemporary literature search that resulted in Brigade reading packages and recommended reading lists. This search included the gathering of Canadian and Allied FIBUA or the U.S. Mobile Operations in Urban Terrain (MOUT) doctrine and training manuals that were reviewed at both brigade and unit level. Many related NATO and U.S. initiatives also came to light as a result of this search.

The second phase was the conduct of a three-part formal brigade professional development and training event. Exercise Ortona Ram Part 1 was a one day officer, warrant officer and senior NCO brigade study session with historical reviews of the Ortona and the Russian Chechniya campaigns, as well as a review of current Canadian FIBUA doctrine, and an overview of the U.S. Marine Corps Metropolis Exercise. Part Two was a three-day round robin of brigade-driven tactical exercises without troops (TEWTs) that included the isolation and break-in to a built-up area with several combat team problems. Offensive operations in a built-up area that included a dynamic demo of section and platoon tactics in a mechanised context, a super tactical terrain walk through downtown Edmonton (total below-ground movement between viewing sites using parkades, metro tunnels, delivery tunnels, and pedways), and a combat team attack estimate. Defence of a built-up area that included the physical siting of all company-level weapons in an empty building in the downtown core (Coyote, including the rooftop deployment of the dismounted surveillance suite, tank, M109 artillery, Eyrx, snipers, heavy machine guns, 84mm, and sniper teams). This was coupled with another terrain walk to look at parks, utility corridors, sewage systems, building types, and obstacles (rivers in the city) and a combat team defensive problem. As might be expected, these TEWTs generated a great deal of media and local interest. However, in all cases, the co-operation from the municipal governments and local citizens was nothing short of superb.

Part Three was the annual brigade-driven, battle group (BG) Janus computer-assisted exercise (CAX). The Army Simulation Centre

in Kingston and local Calian personnel worked very hard during Ortona Ram to permit 1 CMBG to conduct a FIBUA CAX using Janus with a credible degree of fidelity. The scenario was a complex combat problem within a peace support operation. In direct contravention of a NATO sponsored peace agreement, a well-armed force had occupied and taken control of a small town and two power plants. The 1 CMBG mission was to force the belligerents to withdraw, in accordance with the international agreement, or to destroy them if the power plants were threatened. 1 CMBG was also tasked to prevent reinforcements from the parent country from joining the belligerents. As this operation was staged in a friendly country, rules of engagement (ROE) were issued directing that collateral damage was to be minimized and at least one power station was to be captured intact. 1 CMBG experimented with a variety of tactics and groupings to achieve this mission and a number of major lessons were learned. There were fidelity problems; however, it is possible to conduct FIBUA exercises in Janus.

During the year, there were a number of related activities, many of which began to take on a life of their own. There was a continuous public relations campaign within Edmonton to build up public awareness regarding the need for FIBUA and to outline 1 CMBG's plans to hold a major FIBUA exercise in the city. We also sent observers, and eventually, exercise participants to the Marine Corps Metropolis Experimentation centre in California. Courtesy of the Marine Corps, we also sent 1 CMBG soldiers on the Basic Urban Skills Training (BUST) course to learn tactics and techniques. Individual units, particularly the engineers, began to experiment with breaching techniques and other FIBUA-related drills. Brigade initiatives also included a visit to the Edmonton City Police tactical unit to look at their Simunition (paintball weapons effects simulation [WES]) system.

Throughout this entire period, staff work and preparations began for Exercise Urban Ram. Envisaged as a

brigade-driven combat team field training exercise (FTX), this was to be the culmination of our efforts to enhance our FIBUA capabilities. As in any other plan, timing is everything. In this regard, fortune smiled. Planning for Urban Ram happened to coincide with the physical closure of the Griesbach site in Edmonton. The near completion of the Namao site, coupled with the completion and opening of the two new reserve armouries, left large parts of Griesbach empty and awaiting disposal by Canada Lands Corporation. Months of negotiation and discussion revealed that the buildings were to be turned over with zero value and all but two would need to be torn down. With the authority and enthusiastic support of Commander Land Force Western Area, Brigadier General Fitch, it was decided that 1 CMBG would be permitted to turn parts of Griesbach into a range in order to conduct Urban Ram. The exercise was also expanded to include the requirement to offer all three Reserve Force brigades in Western Canada use of the site as well.

Exercise Urban Ram was a difficult undertaking and was by far the most complex training exercise I have been involved in. As well, because of its unique nature and a growing national interest in FIBUA, it began to spin off into an expanding series of related activities. Some examples follow:

- As a result of some excellent work by Major Ian Hunt, the Canadian Forces Liaison Officer to the United States Marine Corps, with some financial assistance from the Directorate of Land Force Readiness, and with the co-operation and assistance of Public Works, 1 CMBG was given the opportunity to trial the new MILES (multiple integrated laser engagement system) 2000 WES. The MILES 2000 is produced by Cisco Systems and operated by UNITECH on behalf of the U.S. Marine Corps. This system and the UNITECH team that supported our trial were the key factors in the success of the exercise. The only unfortunate part of this WES

trial was that we were unable to make the vehicle kits function (tanks and Coyote) due to incompatible wiring harnesses.

- Through the efforts of Assistant Deputy Minister (Material) and the Directorate of Land Requirements (DLR), 1 CMBG was given a unique opportunity to conduct a trial of the SNC Simunition. In the FIBUA environment, this system worked incredibly well and was a superb adjunct to MILES. 1 CMBG and the other two mechanized brigade groups were each permitted to retain ninety sets of weapons and protective equipment and a small amount of ammunition. This will be a permanent addition to our in-house FIBUA capability.
- Through Director of Military Engineering (DMILE), 1 CMBG was tasked to trial a variety of manual and explosive breaching techniques and equipment.
- Through DLR, 1CMBG was tasked to trial folding combat ladders, experimental protective equipment including knee and elbow pads and kevlar protective sleeves.
- The robotics section of Defence Research Establishment Suffield participated extensively to gain a perspective on the challenges of FIBUA combat and to trial some of their own experiments including robotic mine breaching, robotic obstacle crossing (wire), robotic wall breaching, and robotic mapping. This activity attracted the attention of Discovery Channel who did a feature show on parts of Urban Ram.
- Through the LFWA Domestic Operations cell, the City of Edmonton expressed an interest in using Urban Ram as a venue to exercise their emergency response capabilities (Police tactical teams, disaster response to a mass casualty scenario, and fire fighting). Planning was underway but was eventually dropped due to the City's need

to focus on the real issues associated with the 2001 Track and Field Championships. As a result only the Police Tactical Team made use of the site.

These were not the only innovations or contributions to the exercise. Within the brigade staff, other ideas played key roles in the success of Urban Ram.

- Captain Callens, G3 Training at Headquarters 1 CMBG, researched and rented a remote camera system to assist with after action reporting. This commercial system (Sentry) consisted of three sets of 16 mini-cameras connected to centralised computer-processing stations. This system, coupled with the outstanding expertise of the Signals line troop and the adaptive use by the observer/controller staff, provided an inexpensive, yet versatile tool for both after-action reporting and site security.
- The brigade G4 staff purchased sufficient commercial protective equipment (ballistic glasses, knee/elbow pads, and protective sleeves) to ensure that all personnel using the range were protected, thereby allowing the brigade to create a realistic range (wire, broken glass, rubble, etc) and to successfully seek waivers to certain blank firing restrictions.
- 1 CMBG also purchased breaching equipment including hooligan bars, carrying bags, metal ladders, etc. to augment the equipment provided by DMILE/DLR.
- To deal with a shortage of training grenades and restrictions on the interior use of thunder-flashes, the 1 Service Battalion support staff went into the grenade manufacturing business. 1200 tennis balls, filled with sand and wrapped with gun tape (green for friendly (marked fragmentation, flash/bang, and CS) and white for the opposing force (OPFOR). These simulated

grenades, combined with the MILES “god guns” wielded by the observer/controller staff, played an important part in the exercise.

- The new G2 Geomatics cell also proved to be invaluable in the mapping of the training site and creation of three dimension models from maps, building plans and external measurements.
- This was also only the second exercise in 1 CMBG with the LAV III. In addition to a variety of experiments in the use of LAV in a FIBUA environment, we were able to conduct a trial, with assistance from Project Management Officer (PMO) LAV and the Combat Training Centre Trials and Evaluations, on the wire obstacle-crossing capability of the LAV. The trial proved that wire (low wire, type 1, 2, and 3 cat-wire) are not an obstacle to LAV movement and do not affect the operation of the vehicle in any significant way.

The training site was established with a permanent OPFOR (Reconnaissance Squadron, Lord Strathcona’s Horse [Royal Canadians]) that varied in size depending upon unit requirements. We also created a permanent battle simulation team. The permanent observer/controller cadre controlled the conduct of the exercise, simulated weapons fire (tanks, arty, 25mm, AT weapons, mines, booby-traps and grenades), assisted with the use of MILES, monitored the surveillance camera system to collect after action review (AAR) points, and assisted at the AAR process with the unit commanding officer. Each combat team was composed of a rifle company (three or four platoons) augmented by four tanks, four Coyote in surveillance/direct fire support vehicle role, a FOO party, and an engineer troop. Some units also added LAVs, helicopters, sniper teams and recce detachments.

Urban Ram was a success from virtually every point of view. In the month that the range was open, 12 combat teams went through the full gamut of training from section/

platoon, company or company group and combat team range (including three reserve combat teams). An artillery battery of four platoons advanced to the company range stage. Other platoon-sized elements from the engineers, armour, service battalion went through the various platoon ranges. Several units practised helicopter roof top insertion. 1 Service Battalion went through urban occupation drills and anti-ambush stands. 1 Field Ambulance conducted a 100-victim mass casualty exercise. The exercise also had other spin-off effects. Most units (Regular and Reserve) conducted extensive FIBUA work-up training to prepare for Urban Ram. This resulted in preparatory FIBUA exercises in Fort Lewis, Nanaimo, Regina, Winnipeg, Shilo, and here in Edmonton, to name just a few.

One of the key discoveries is that FIBUA training rivals patrolling as a means to identify, develop, and train junior leaders. MILES inflicts casualties, and as a result, it is often younger soldiers who are forced to jump into the breach and take command. In this regard, FIBUA training challenges them to the extreme and provides a superb leadership learning environment. The learning curve was exponential and it will take months to sort through and catalogue all of the lessons learned. However, what is clear from this two-year process is that the army has the capability to conduct FIBUA training now. It is not too hard and it is not overly expensive. It just takes recognition of the need and both desire and commitment.

I am convinced, as a result of this experience, that we need to recognise that FIBUA training is best delivered at the company level, and to save training money, it is an activity best conducted as close to home as possible. We also need to maintain the momentum while we determine the final Canadian solution in terms of doctrine and training. We must avoid the high tech, 100 percent solution, if this gets in the way of getting on with training now. To start training we need to do the following:

- Simunition: Ninety sets now exist in each brigade. This is enough to conduct excellent platoon-level WES training on a continuing basis. The Land Staff must develop a method to purchase ammunition and authorise its use immediately. DLR must start work on a system to permit Simunition to be used with the service helmet (train as you fight).
- Soldiers do not understand weapons effects. This compounds the problem of attempting to accurately simulate the full range of brigade and OPFOR weapons. The Army Lesson Learned Centre and CTC must develop a CD-ROM depicting the terminal effects of a full range of weapons on various types of vehicles and structures. Viewing of this CD must be immediately incorporated into the army Medium Level of Capability (MLOC) process. This would also be very useful to assist observer/controllers in the accurate simulation of fire during FIBUA exercises. It would also assist players in understanding the implications and effects of using various weapons.
- The Chief of the Land Staff (CLS) WES project must be phased to permit the acquisition of WES now, irrespective of the long-term plans for the Canadian Manoeuvre Training Centre or national FIBUA training sites. The imperative requirement is for force-on-force training. This requires about 300 sets of WES, 8-10 vehicle sets, some anti-tank weapons, with the ancillary "god guns" and management software. If we can afford sufficient vehicle sets to equip a full mechanised combat team all the better. It would be best to obtain enough for one combat team in each mechanized brigade group. If this is unaffordable, buy or lease one set and share. With only one set, the army could be running combat team exercises like Urban Ram on a continuous basis. Without WES it becomes difficult, if not possible, to improve our

FIBUA capability as there is no consequence of error.

- Major garrison locations (Edmonton, Shilo, Petawawa, Valcartier and Gagetown) each require a low-level (company-sized) FIBUA site. FIBUA tactics and drills must be part of the annual MLOC process and practice takes time. In the LFWA context at least, the time necessary will not be spent if 1 CMBG must expend \$50 plus dollars per day to conduct low-level drills in a centralised location like Wainwright. In the short to medium term, this need not involve new construction. Plans are underway to construct semi-permanent sites in both Edmonton and Shilo using existing phased-out facilities. The major shortfall in any local FIBUA site will be a multi-storied, multi-roomed complex to teach and test command and control and situational awareness.
- We must acquire sets of video mini-cams for use in AAR reporting and to explore their use in intelligence, surveillance, target acquisition and reconnaissance operations in built-up areas. A complete set (computer, 15 cameras, and software) costs about \$15 K. This system, coupled with dedicated handheld video cameras, is a cheap but indispensable tool for AAR work and likely has application in a wide variety of training and even operational situations.
- If we are going to conduct FIBUA training on a regular basis, then the doctrine manual, CFP 318(1), needs serious revision. At the moment, it is virtually impossible to conduct close combat training without CLS training waivers, due to restrictive minimum safe distance requirements. Outline the protective equipment that must be worn (flak jackets, helmets, ballistic eyewear, hearing protection, gloves, etc.), but fix the problem. At the

moment, Canadian regulations do not permit force-on-force to routinely take place in a FIBUA setting and this has serious implications for any future WES acquisition.

- We need to take a hard look at our new TCCCS communications system. There is growing evidence that this VHF-based system will encounter serious problems in an urban environment. Proof is the number of soldier-purchased handheld UHF systems that proliferated during Urban Ram. Command and control is essential and we need to make sure that our equipment works or risk losing any technological edge we may have.

We have the capability to conduct FIBUA training today and it is imperative that we start now. Yes, we still need to continue work on developing our doctrine and Battle Task Standards. Yes, we still need to develop a comprehensive weapons effects simulation system. Yes, we must work on introducing technology and correcting equipment deficiencies. However, none of these things stop us from starting on the basics today and with a minimal investment in WES and some innovation and initiative we can expect a quantum increase in capability virtually immediately.

As a side bar, it appears that LFWA may retain at least the combat team portion of the existing Urban Ram training site for several years (negotiations are underway with Canada Lands Corporation). I would contend that this is the premiere FIBUA training site in Canada today. In its current state, this site offers tremendous possibilities for not only 1 CMBG, but for other brigades as well. As a test of the Canadian Manoeuvre Training Centre concept, CLS may want to direct that combat teams from both 5^e GBMC and 2 CMBG take advantage of this unique and time-expiring site. We also want to look to the future. Another excellent opportunity to conduct a

similar series of exercises may occur in 2003 or 2004 when we abandon Kapyong Barracks in downtown Winnipeg. What other sites already exist in Canada?

Are we serious about training for the future? Then let's get on with it.



ABOUT THE AUTHOR...

Brigadier-General Nordick enrolled in the Canadian Forces in August 1973. He attended Royal Roads Military College in Victoria and graduated from The Royal Military College of Canada in 1977 with a baccalaureate in English. His service included various appointments with the 1st and 3rd Battalions, Princess Patricia's Canadian Light Infantry, Headquarters 4 Canadian Mechanized Brigade Group and National Defence Headquarters. He also served briefly as a staff officer in Headquarters Canadian Forces Middle East, Manama, Bahrain during the Gulf War. He is also a graduate of the U.S. Army War College. Brigadier General Nordick has served two tours in Cyprus and with the United Nations Protection Force in Croatia, where he commanded the 3rd Battalion, Princess Patricia's Canadian Light Infantry. He was awarded the Meritorious Service Cross for his outstanding leadership during this deployment. Between 1991 and 2001, Brigadier-General Nordick commanded 1 Canadian Mechanized Brigade Group. He was promoted to his current rank during the summer of 2001 and is now the Deputy Commander, Land Force Doctrine and Training System and the Commandant of the Canadian Land Force Command and Staff College. This article was submitted while Brigadier General Nordick was commanding 1 Canadian Mechanized Brigade Group.



A depiction of the storming of the Castle of Badajoz on 6 April 1812. Badajoz was the second of two fortress towns controlling the main routes between Portugal and Spain. Both had to be taken if the British were to see any progress in the Peninsula. While Ciudad Rodrigo fell relatively quickly, Badajoz was an epic action involving three sieges and a nightmare assault. The Allied Army that stormed Badajoz included British, German and Portuguese units and one Canadian officer. Among the few Royal Engineers was Lieutenant Edward de Salaberry, brother of better known Charles de Salaberry, victor of the Battle of the Chateauguay during the War of 1812. Edward led a desperate charge into one of three breaches made in the fort's defensive wall. He never made it through and his twisted body was found the next day. Nearby lay another fallen officer, Lieutenant Francis Simcoe of the 3rd Battalion, 27th Foot. He was the eldest son of John Graves Simcoe, the first Lieutenant-Governor of Upper Canada, and had lived in Canada for several years.

An Impressive and Amazing Force: The Hoplite Warrior

by Captain Tod Strickland

INTRODUCTION

It is hard to imagine that the hoplite warrior of 7th century¹ Greece and the modern Canadian infanteer have anything in common; they seem to be completely and utterly different. Even though they are separated by the technological and martial advances of over two millennia, these warriors share a distinction that their respective societies placed upon them: the obligation to defend their state against its enemies. The modern infanteer may seem to be a very different individual than his/her counterpart of the classical period, but in many ways, the foot soldier of the 21st century owes much to his/her forebear. To examine the heavy infanteer of ancient Greece is to look back to one of the “few times in history when an aura of caste and elegance has surrounded the infantry.”² Additionally, as Victor Hanson asserts, “Western warfare starts out with the Classical Greeks as an ethical practice to preserve society.”³

The intent of this paper is to examine the hoplite of ancient Greece, specifically, that of the 8th to 5th centuries, with particular regard to his relevance to the modern Canadian infanteer. The scope will include his arms and armour, training, method of making war (tactics), how leadership was exercised and, lastly, how the hoplite is still pertinent to the modern infantryman. The reason I have chosen to focus on this time frame is primarily because it is the first era following the Dark Ages for which we have verifiable historical data. A secondary reason is this period coincides with the rise of Sparta and closes with the battle of Marathon (following which, Athens, and later Macedonia, would replace Sparta as the pre-eminent military power in the known world). These are important events within the profession

of arms and serve as tangible anchors to this discussion. However, prior to discussing the hoplite, it is important to set the stage, and it is here that I will now turn with a brief comment on the societal and cultural context in which these soldiers served.

CULTURE AND SOCIETY

The society that the “foot-slogger” of ancient Greece served in was quite different from our own. The first, and most distinctive, difference between the two cultures was how the Greeks viewed war and warriors. One only needs to look at Athenian art, in particular that found on pottery, to see that the soldier was revered by his society, both as its protector and as the living expression of democracy in action. This, coupled with the armour that was dedicated at Hellenic sanctuaries, serves to indicate the importance of warfare in ancient Greek society.⁴ Military duty was viewed as a direct reflection of the political rights enjoyed by the state’s citizens;⁵ those with the most rights and power, therefore, had the greatest obligation to serve.⁶ How the various classes served, and in which arm, varied from state to state with soldiering being almost universally a part-time occupation, done mainly in the summer in the period between the planting and harvesting of crops. What almost all of the states of 8th century Greece did have in common, however, was their reliance on the hoplite, and his weapons, as the personification of their will.

The citizen soldier of ancient Greece, in the hoplite, was a man to be both feared and respected. Taking his name from his primary piece of equipment, his shield or hoplon, he was well equipped and trained for his task. Armed with one or two spears and a short sword, protected by his shield, greaves (shin guards) and possibly a bronze curiasse (breast plate) he was a most formidable foe. The essence of his craft was teamwork and leadership, as shown in the phalanx. En masse, ready for battle, they were a force that could only be stopped by another force in kind or one using a more “combined arms” approach. Once the hoplite appeared on the battlefield, the age of the Homeric hero was dead; courtesy, primarily, of a three-foot wide circular shield.



Hoplite warriors showing shields, lances, helmets and greaves.

An Impressive and Amazing Force: The Hoplite Warrior

ARMS AND ARMOUR

The hoplite shield was the apex of military technology in its day. Approximately one metre in diameter and weighing up to nine kilograms,⁷ it offered both its bearer and the man to his left considerable protection. Made of wood and usually covered with bronze, it was able to deflect both spear thrusts and sword strikes. The shield was held with the left arm using a set of two straps: the first was designed to bear the majority of the weight on the arm; the second was grasped by the hand. Of particular note, the second strap was often small enough to allow the warrior to hold two spears or, more accurately, lances in his hand. This was among two of the major advantages offered by this design; the other being that because of the convex design and the strap arrangement, it could be held for longer periods than its predecessor, the dipylon⁸ design. However, it did have some disadvantages in that it was not as manoeuvrable as the dipylon, nor could it be worn on the soldier's back.⁹ The last disadvantage, that it offered little protection to the right side of the body, was negated by fighting in close formation as a phalanx.



Hoplite Helmet.

One thing that should be noted is that the shield decorations served several purposes other than mere ornamentation. Covering the shield in bronze and paint served to protect the shield from the elements and hopefully minimized the possibility of the shield splintering at an inopportune time.¹⁰ Additionally, the designs¹¹ that were emblazoned on the shield acted as primitive elements of psychological warfare, serving to instil fear in an opponent¹² by hopefully unnerving him and making him more likely to break when the phalanx collided.

HOPLITE HELMET

The effects that this shield had on classical warfare were incredible. First, in many ways, it negated the use of large amounts of body armour. In many cases the hoplite was now able to dispense with a made-to-measure cuirass¹³ and could wear a more comfortable tunic. Exceptions to this were generally leaders or the right hand man (or marker) in the phalanx who would not always have the full protection of a hoplon at their disposal. The use of the shield also served to allow larger bodies of armed men, as the cost of soldiering¹⁴ was now decreased, by negating the necessity, in the majority of cases, for a hand-made bronze breastplate. Another effect was that by making the line of the phalanx harder to break, it was better able to withstand the attack of a cavalry force. This in turn spurred the development of cavalry (which would ultimately have dire consequences for the hoplite). However, the shield was but one portion of the panoply of equipment protecting the hoplite.

On his legs, the infanteer of ancient Greece wore greaves of bronze (as can be viewed in photographs 1 and 4). These seem to have been form fitting, being pinched around the calf and the ankle. Interestingly, no evidence of laces has been found, which likely indicates that they were uncomfortable and probably

fell off in the course of battle.¹⁵ Upon his head, he wore a helmet made again of bronze. As can be seen in the photographs, these helmets do not appear to have been comfortable, with no harness or suspension system to absorb the blows that would have been suffered in the course of battle.¹⁶ Further, they would have made hearing difficult and would have been hot in the summer sun.

As far as armament goes, the ancient hoplite had a variety of “tools in his toolbox.” First and foremost among these was his spear or lance.¹⁷ These varied in length but were generally two to two and a half metres long;¹⁸ in later eras, these would grow to be as long as six metres. The spears were tipped on both ends with either an iron or a bronze point.¹⁹ This innovation enabled the rear ranks of a phalanx to dispatch any foes that had fallen on the ground as the phalanx pushed forward. A short sword of iron was the hoplite's secondary weapon. This would have been used for hand-to-hand fighting once the opposing phalanxes had collided, with lances quite possibly being broken. It would have also proven useful during the pursuit of a broken phalanx or in individual combat (extremely rare). All told, the total equipment weight was approximately 23 to 32 kilograms.²⁰ This in turn led to many hoplites having a squire to assist them with carrying the equipment to the battlefield—in order to enable the soldier to arrive rested and ready to fight.

Interestingly, one of the items not used by the hoplite was the bow. Though prevalent in archaic Greece, and in some art, it was considered to be the “weapon of the barbarian”²¹ and was not used by the majority of ancient Greeks. Over time, however, this would of course change. Now that we have covered the tools of the trade, let us move on to the training that the soldier of old underwent.

TRAINING AND THE PHALANX

The primary purpose of training in a hoplite force was not, as might be expected, in the use of arms; rather, it was designed to turn a mass of men into a unified and disciplined fighting

force.²² This was the case because fighting had moved from the heroic individual contest to a clash between formed bodies of men. In the phalanx, there simply was not room for feats of arms. What was required was men working in unison to a common goal: pushing the enemy from the battlefield. Some emphasis was placed on the use of the spear; however, it would not be until the 4th century that training in skill at arms would become an important part of training.²³

For many city-states of ancient Greece little time at all was occupied by training and for many young men it was largely “left to chance.”²⁴ This was considered an acceptable practice in the majority of cases because daily life offered plenty of opportunity for learning by osmosis: hunting, dancing and athletic contests all used the skills and built the physical strength needed to be a relatively successful infanteer of the period. However, there was one notable exception to this belief, the city-state of Sparta.

Spartans took their military and its training extremely seriously. Young men were separated from their families as early as the age of seven. By the time they were twelve, they were apprentice soldiers/citizens. Throughout their time as apprentices, they learned the basics, not only of soldiering, but also of the political process. At eighteen, they had to partake in a test that included ritual combat and a period of retreat (known as the *cryptic*) on the frontiers of Sparta. Here, they would put to practise the skills that they had learned by hunting down the helots.²⁵ Only at the age of twenty-four, following approximately seventeen years of training, would they achieve the dual status of hoplite and citizen,²⁶ taking their coveted spot in the phalanx.

The actual training for the phalanx and in the art of manoeuvre over the battlefield were the most important parts of a hoplite’s training. Collectively, the skills were known as *hoplomachia* (hoplite fighting); this consisted of the movements in which amateur soldiers were required to be proficient. Specifically, hoplite

fighting included such things as changing the lance from an underhand to an overhand grip, running in full armour and keeping the shield at the appropriate height on the body to protect oneself and the man to the left.²⁷ Further, they seem to have practised movements designed to draw their enemy in, for example, advancing, halting and thrusting with the spear to put their opponent off balance. It can, therefore, be surmised that there must have been much time devoted to “bashing the square” and practising the art of moving as one.

THE PHALANX

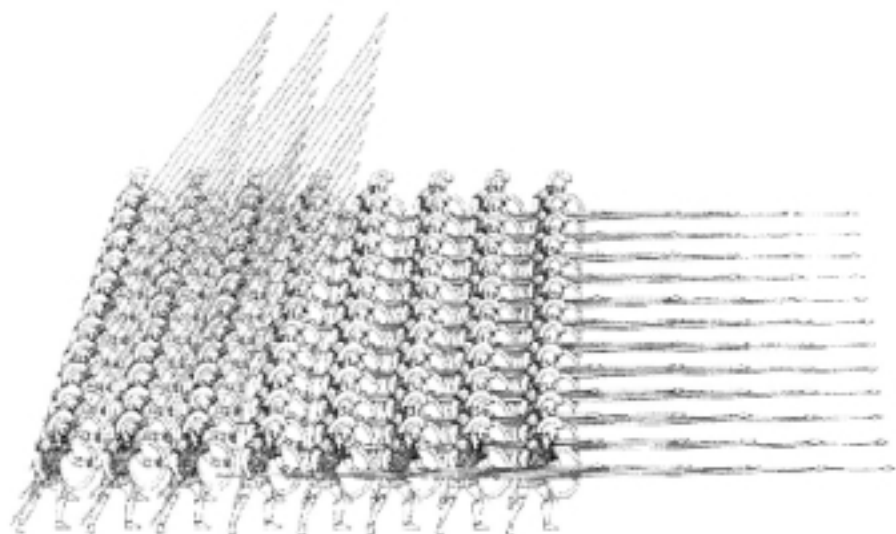
The primary purpose of the phalanx was to provide “moral and physical” solidarity to the troops it contained.²⁸ The phalanx varied in depth from three to fifty ranks, with practicality normally dictating somewhere between eight and sixteen ranks. The two tactical principles that guided the employment of the phalanx were its length and its depth. Depth gave the phalanx weight and enabled it to push an enemy from the field. Length facilitated the envelopment of the foe.²⁹ Often times, determining the exact number of ranks and files³⁰ would be the single most important decision faced by a commander. The best men would often be placed in the front and rear ranks in order to hold the phalanx together.³¹ An interesting link between the hoplite of ancient Greece and the Canadian infanteer can be found in the fact that phalanxes were usually

deployed by tribe;³² this would later evolve into the modern regimental system. Once training was complete, the hoplite could count on serving for the majority of his adult life. And, Greece being the violent place that it was, he could expect to partake in at least one battle.

BATTLE AND TACTICS

At the start of the 8th century, warfare in ancient Greece was quite ritualized. Cavalry, as we understand the modern term, did not yet exist. Horses were used primarily to pull chariots and act as battlefield taxis,³³ leaving the battlefield squarely in the hands of the hoplite. Over the next 300 years, warfare evolved into what could be termed a “combined arms battlefield,” with formations of cavalry, light infantry and *psiloi* (archers and skirmishers armed with slings) all appearing on the battlefield. The hoplite who would have served at the time of the battle of Marathon (490 BC) would have probably undergone an experience similar to the following.

First, his day would have started with a ceremonial sacrifice to appease whichever deity he felt to be “on his side.” The ancient Greek armies travelled with sheep to be sacrifices at all critical points—borders, river crossings, campsites and battlefields.³⁴ Once this was done, he would have a ceremonial mid-morning breakfast, complete with his wine ration.³⁵ As



The Phalanx

this was being finished, he would probably have heard the good wishes of his commander and then taken his assigned place in the phalanx. Phalanxes of hoplites traditionally formed the centre of the battle line.³⁶ They were, as warfare evolved, protected on the flanks by formations of light infantry and possibly cavalry. They would have advanced onto the battlefield preceded by the psiloi who opened combat using their slings to cause the first casualties in the opposing force; this, in an attempt to disrupt the movement of the enemy's phalanx and start the process of its eventual collapse. However, once they had launched their missiles at their opponents, they had to be quick in moving to the flanks of the phalanxes behind them, lest they be trapped between the two forces about to collide.

With the withdrawal of the psiloi, the opposing armies would advance en masse. Normally, the first five ranks of a phalanx would have held their lances in an underhand grip and would have tried to find any opening in the enemy's ranks into which they could attempt to drive the tips of their lances. The rear ranks would have pushed right up onto the front ranks, using their large round shields to push on the backs of their comrades, forcing them to advance. Additionally, cavalry skirmishes may have developed on the flanks, particularly if they were trying to attack the weak spots in their enemy's phalanx—the sides and the rear. Now it became a matter of stamina, of staying on your feet, while being pushed back and forth, until either your phalanx or that of the foe broke.

A broken phalanx would have resembled little more than a mob: turning and trying to run, possibly while throwing portions of its panoply of equipment down to increase speed. Sometimes the retreating enemy would have been pursued by light infantry forces or, rarely, by hoplites themselves.³⁷ However, this was not an important aspect of the battle. Once the enemy had broken, the victor was declared and that was all that really mattered. Following the close of battle, it was common for the

opposing forces to exchange their dead under a flag of truce and to carry out the duty they had of burying those that had died fighting.³⁸

Obviously, this form of warfare must have seemed chaotic and harsh. Estimates of casualties in early hoplite battles run from ten to fifteen percent. That these numbers probably seem low should not come as a surprise. The ancient Greeks were not out to annihilate each other; rather, they were simply out to impose their will on another state. If a state accepted its loss at the hands of its conqueror then there was no need to destroy it. However, this form of battle does raise a question: specifically, what role did a leader play?

LEADERSHIP AND COMMAND

Leadership of hoplite forces was a challenge that Greeks of standing were glad to face. It is through their practical exercise of command that many things a modern Canadian infanteer takes for granted had their beginnings. Our organizational structure has as its source the fact that a hierarchical structure was needed to allow command to be exercised in an organization where all were held to be "equals" in that they were citizens.³⁹ The modern non-commissioned officer (NCO) has his genesis in the Greek armies of the 5th and 6th centuries; by contrast, the armies of Homer had no such professional to draw on. In that time, a leader was simply expected to set the example in personal combat. This changed with the rise of the phalanx as a tactical element.⁴⁰

For most ancient commanders, there was a distinct similarity with their modern counterparts in their role before battle was joined: leaders were expected to ensure that their unit was properly organized and prepared for battle. It was their responsibility to guarantee that all members were both physically and mentally prepared for the challenges they would face. Additionally, it fell to the leaders to bring their soldiers onto the battlefield in the best formation possible and under the most favourable conditions.⁴¹ Once on the battlefield, however, the

commander's role as tactician came to a close and he would join his phalanx, usually on the right hand side, to set a positive example in combat.²

Leadership was originally based on the authority one had gained during his previous exploits.⁴³ Those that had shown themselves to be effective leaders were followed. During this period, great emphasis was also placed on social standing within a soldier's home community because it was felt this would guarantee his loyalty and courage.⁴⁴ It was only as the battlefield increased in complexity, and the age of ritualized warfare ended, that the intellectual and technical sides of soldiering were felt to be important elements for the leaders of the hoplites.

Commanders in ancient Greece had a genuine desire to "lead from the front" and, if required, die with their men.⁴⁵ This conduct was felt to be an important part of officership. As well, it has to be admitted that once battle was joined, there was little that an officer could do: fight with the men or watch from a distance were really the only options. Clearly, any leader worth following did the former and, evidently, there were a fair number of good leaders within the hoplites. Victor Hanson has noted that the sudden absence of a leader from the battlefield could be enough to cause panic in his troops.⁴⁶ Another indicator of the regard that hoplites had for their leaders is the fact that there are almost no references to commanders ever being attacked by their own men;⁴⁷ indeed, this is a distinct contrast from some armies in modern times. Obviously, regarding leadership, the Greeks were doing something that warrants emulation. This in turn begs the question—is there anything else in the history of the hoplite that is still relevant to the modern infanteer?

RELEVANCE FOR THE MODERN INFANTRYMAN

Obviously, it is not my intent to argue for a return to the carrying of wooden shields and lances; nor do I think that the modern combat leader

has to always be in the front rank of the phalanx. However, I do believe that there are, at the very least, three lessons that we can apply to the modern foot soldier, as shown by the hoplites of ancient Greece. Specifically, these are:

- a. the dangers of military conservatism;
- b. the imperative to train; and
- c. the necessity for effective leadership.

The dangers of military conservatism should be obvious to us all. Tactics, technology and equipment are always in a state of change; we are locked in a never-ending race to advance faster than our potential foes. This is part of our responsibility as professionals. We would do well to look at the Spartan example. From the 8th to the 5th century, Sparta was the dominant military (ground) power in Greece, primarily as a result of relying on infantry and, specifically, the hoplite. However, during those three hundred years, the Spartans do not seem to have kept pace with the changes to warfare that the rest of the ancient world underwent. The Battle of Marathon took place in 490 B.C. and the city of Athens became the centre of power on the Greek peninsula. Sparta did not even attend because, in my opinion, the Spartans did not “remain current” on the battlefield. In some ways, this can be viewed as the beginning of the decline of Spartan military might. War was changing and Sparta did not keep up; instead, the Spartans opted to remain solely a heavy infantry force. This would have drastic consequences over the next two centuries. We need to learn from this lesson.

Our ground forces have recently begun to adopt the LAV III. This will be the primary combat vehicle for the infantry for the next twenty to thirty years (using the outgoing Grizzly as a model for the time frame that it will be expected to last). What are we doing to examine the period after that? Will we still have tanks in the arsenal? How will our artillery need to be configured to project our firepower forward? What air assets will

we need to hit the enemy? What intelligence gathering capacity will be required for targeting? Will we be stuck, relying on the same shield and lance, while our adversaries are using other more advanced or deadlier methods? We need to be dynamic and harness the process of change to our advantage; instead of being slaves to the process, we need to be its masters.

The second lesson that we can learn from Sparta is more positive: the necessity to train. Admittedly, we probably do not need to start at age seven, but we need to take the process more seriously. When conflict was a contest between opposing phalanxes, the side that was better trained for the stress of battle was usually the victor; this phenomenon has not changed in 2,500 years. Training continues to be the backbone of our combat effectiveness and our overall operational capability. It cannot be handled, as some states of ancient Greece did, in a “left to chance” manner. This means we need to establish and use army-wide training priorities and goals, assessments and After Action Reviews (AARs) after all training activities and funding to enable all of this to happen.⁴⁸ Additionally, a solid argument can, and should, be made for increased use of simulation (such as a weapons effects system [WES]), the development of a facility similar to the National Training Centre (NTC) and enhanced research and development.

Additionally, this training must incorporate all of the arms we expect to use on the modern battlefield. In the same way that the Spartans trained their hoplites in the use of the lance, sword and shield, we need to train our leaders (and our soldiers) in the use of artillery, infantry and armour. I do not think it carries the metaphor too far to refer to the modern combined arms team as a phalanx. The modern team incorporates many of the same elements: brute power, force, protection and flexibility, to name a few. Our phalanx may be far more spread out than that of the hoplite, but it is just as reliant on the soldier (or airman) to our left and right, as that of old.

The last lesson that holds specific

relevance to the modern foot soldier⁴⁹ is the requirement for effective leadership. The roles that hoplite officers and NCOs possessed are the same as those of the modern commanders of infanteers. The tools may be different but the tasks remain the same. We need to keep our emphasis on leadership and on all that that term encompasses. To quote General Gordon Sullivan of the United States Army, “Leadership is about purpose, management is about practices.”⁵⁰ What sense of purpose are we giving our soldiers?

A hoplite force that lacked effective leadership would have been ineffective on the battlefield. We are in exactly the same situation. It is imperative that we place our focus, at all levels, on developing leaders. Capable, effective and dynamic leadership is essential in the conduct of all operations, from domestic humanitarian operations through peacekeeping and peace making, and, finally, to war. It is incumbent on all of us to continuously develop the leadership skills of our subordinates, so that if we “fall in the phalanx,” they will be both ready and able to take our place.

CONCLUSION

The hoplites of ancient Greece were an impressive and amazing force. They had a distinct role to fill in their society and were respected, even admired, for their ability to carry it out. Though their time may have passed, they still have relevance to the modern soldier. Among the eight reasons that Victor Hanson gives for the military successes of the ancient Greeks are such things as the use of advanced technology (as shown by the use of the hoplite shield), superior discipline and “a systematic application of capital to war making.”⁵¹ These are obviously not new to the profession of arms and are certainly worthy points to emulate. It is imperative that we listen to what the hoplites have to teach. As can be seen, we really aren’t all that different.





The Hoplite.



The Canadian Infanteer.

ABOUT THE AUTHOR...

Captain Tod Strickland obtained a Bachelor of Military Arts and Sciences from The Royal Military College of Canada in 2001. Since joining the Canadian Forces in 1988, he has completed tours with the 3rd Battalion, Princess Patricia's Canadian Light Infantry, the Infantry School and 1 Canadian Mechanized Brigade Group and recently completed the Transitional Command and Staff Course at the Canadian Land Force Command and Staff College. As well, he was employed with Operation "Palladium" Roto 0 in 1996. Captain Strickland is currently employed as the Operations Officer of the 1st Battalion, Princess Patricia's Canadian Light Infantry in Edmonton, Alberta.

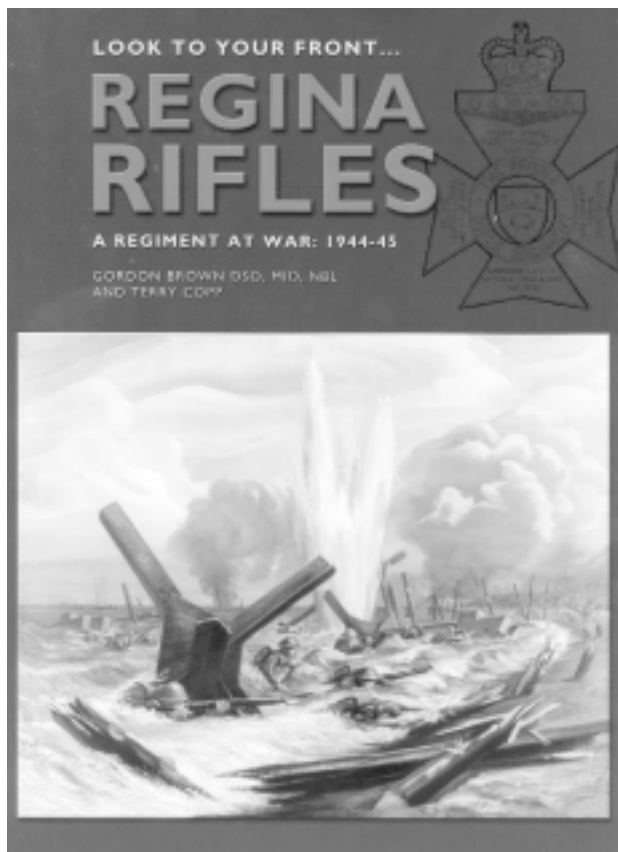
ENDNOTES

1. All dates contained herein are B.C.
2. Lynn Montross, *War Through the Ages*, (New York: Harper and Brothers, 1946), p. 5.
3. Victor Davis Hanson, *The Wars of the Ancient Greeks: and their Invention of Western Military Culture*, (London: Cassell, 1999), p. 27.
4. Robin Osborne, *Greece in the Making: 1200-479 B.C.*, (London: Routledge, 1996), p. 174.
5. Yvon Garlan, *War in the Ancient World: A Social History*, (London: Chatto & Windus, 1975), p. 87.
6. *Ibid.* As an interesting aside, using 5th century Athens as an example, the highest strata of society served on her naval vessels, the second

highest (hippeis) served in the cavalry, the third class (zeugites) served in the heavy infantry and the fourth (lowest) class (thetes) served in the light infantry. I leave it to the reader to determine if the Athenians had their ordering of classes correct or not.

7. Hanson, p. 52.
8. The dipylon shield was shaped like a peanut with a harness system made of crossed straps of leather.
9. Osborne, p. 175.
10. Hanson, p. 60.
11. It is interesting to note that Sparta was one of the few states that carried shields with uniform designs and made use of uniforms. The effect of this unified appearance on what was a very chaotic battlefield must have been absolutely intimidating.
12. Osborne, p. 168.
13. *Ibid.*, p. 176.
14. The majority of the costs for equipment at this time was borne by the soldier himself.
15. Hanson, p. 57.
16. The Spartans made up for this, to some degree, by keeping their hair long and leaving it flowing out from under their helmets. *Ibid.*, pp. 48 & 59. Additionally, some, such as that shown here, did have leather "protection stitched to the inside." *Ibid.*, p. 41.
17. Scholars have traditionally referred to it by both terms. The proper term seems to be lance, as the item was generally held throughout its use and was not thrown.
18. Garlan, p. 123.
19. Osborne, p. 27.
20. Hanson, p. 58.
21. Garlan, p. 128.
22. *Ibid.*, p. 165.
23. Training in the use of the sword did begin about 100 years earlier in the 5th century. *Ibid.*, p. 169.
24. *Ibid.*, p. 172
25. Helots were a group of slaves that seem to have been in a constant state of revolt in Sparta during the 8th to 5th centuries.
26. *Ibid.*, p. 174.

27. Hanson, p. 63.
28. Montross, p. 7.
29. Hans Delbrück, *History of the Art of War: Within the Framework of Political History Antiquity*, Vol.1, Trans. Walter J. Renfro Jr., (London: Greenwood Press, 1975), p. 3. Envelopment was only facilitated if one phalanx was longer (more frontage) than that which it opposed.
30. Ranks are the number of men that form the depth of the phalanx. This contrasts with files, in that files are the number of men that form the frontage (or length) of the phalanx. The phalanx pictured is 8 ranks deep with a frontage of 12 files.
31. Delbrück, p. 54.
32. Hanson, p. 121.
33. Osborne, p. 175.
34. John Keegan, *A History of Warfare*, (London: Pimlico, 1994), p. 248
35. *Ibid.*, p. 284. Also, Hanson, p. 55. It should be noted that warfare at this time did not include such things as night operations or ambushes and the like; in some ways, it could be considered very civilized.
36. Jacques Boudet, *The Ancient Art of Warfare: Volume 1 1300 B.C./1650 A.D.*, (London: Barrie and Rockliff, 1966), p. 70.
37. *Ibid.*
38. Keegan, p. 251
39. Garlan, p. 160.
40. *Ibid.*, p. 145.
41. *Ibid.*, pp. 145-146.
42. This would change about 200 years later, when the combined arms battlefield became a more distinct reality. Once the battlefield was more complicated and it became necessary to carry out the function of coordination of effort, some commanders would have to leave the phalanx. *Ibid.*, p. 146.
43. *Ibid.*, p. 148.
44. *Ibid.*
45. Hanson, pp. 107-110.
46. *Ibid.*, p. 109.
47. What incidents there are almost invariably involve mercenaries. *Ibid.*, p. 110.
48. Admittedly, these are in place; however, how universally are they carried out?
49. I submit that it is just as important for any leader in the combat and the combat service to support arms.
50. Gordon R. Sullivan and Michael V. Harper, *Hope is Not a Method: What Business Leaders can Learn From America's Army*, (New York: Random House, 1996).
51. Hanson, pp. 23-24.



***Special Notice to readers of the
Army Doctrine and Training Bulletin
of a wonderful new publication:***



**Look to Your Front... Regina Rifles
A Regiment at War: 1944-45**

by Gordon Brown, DSO, MID, NBL and Professor Terry Copp



Soft Cover, 246 pages, 50 photographs, 8 maps

Price: **\$36.00** (includes GST and shipping)

Available from:

The Laurier Centre for Military Strategic and Disarmament Studies
Wilfred Laurier University, Waterloo ON N2L 3C5
or by phone: **(519) 884-0710**

Payment by cheque, money order, Visa or Mastercard

A special feature in this issue of *The Army Doctrine and Training Bulletin*

The 2001 Army Symposium:

Responding to Change: Doctrinal Development in Inter-War Canada and Germany

The 2001 Army Symposium, the first of an annual event, was held at Fort Frontenac in Kingston, Ontario on 10 May 2001. Each annual Symposium will examine issues confronting the Army or of professional interest to its members. The Symposium was sponsored by the Land Force Doctrine and Training System and *The Army Doctrine and Training Bulletin*. The next symposium will take place during the Spring of 2002. Details will be published in a future issue of the Bulletin and advertised to units.

The 2001 Army Symposium was pleased to offer four outstanding speakers:



Dr. Jim Corum - School of Advance Airpower Studies, Air University, Maxwell Air Force Base; author of *The Roots of Blitzkrieg: Hans von Seeckt and German Military Reform* and *The Luftwaffe: Creating the Operational Air War, 1918-1940*.

Professor Robert M. Citino - Department of History, Eastern Michigan University; author of *The Path to Blitzkrieg: Doctrine and Training in the German Army, 1920 - 1939* and *The Evolution of Blitzkrieg Tactics: Germany Defends Itself Against Poland, 1918 - 1933*.

Dr. Roman Jarymowycz - Former Dean of the Militia Command and Staff Course; author of several articles on the Normandy Campaign and of *Tank Tactics from Normandy to Lorraine*.

Dr. Bill McAndrew - Formerly of the Directorate of History and Heritage, author of numerous articles and books on Canadian military history and the Canadian Army in the Italian Campaign.

The Army Doctrine and Training Bulletin is pleased to present in the pages that follow the papers presented at the 2001 Army Symposium.



Please note that Dr. Corum's paper was unavailable at the time of printing. We hope to provide this in a future issue of The Army Doctrine and Training Bulletin.

Canadian Doctrine: Continuities and Discontinuities

by Bill McAndrew, CD, Ph.D.

Arbitrary time frames can be organizationally useful. Military histories of the 20th Century divide invariably into the First World War: the inter-war years, the Second World War, the Cold War, and so on. But military histories can also distort. Continuities flow naturally from one to another: continuities of events, people, thought, and practice. Armies still debate the relative merits of manoeuvre and attrition, soldiers and technology. The 20th Century began with technology to deliver vast quantities of high explosives on a small space; the 21st began with fancier technology to deliver vaster quantities on smaller spaces.

The big wars overlapped. Most of the major technological innovations of the Second War, tanks, indirect fire, aircraft, radios—had emerged from the First War. The twenty-year bridge between them is not as long as the amount of time Canadians served in Cyprus. A British Columbia Regiment sergeant who crossed the Rhine on Easter Sunday 1945 spent a previous Easter Sunday attacking Vimy Ridge. Eighty-four years later, the villages surrounding Vimy were emptied on another Easter Sunday for fear of mustard gas. The most senior Canadian Second World War commanders were First War veterans. It would be surprising if their later command styles and their way of war, had not been professionally marked by their earlier experience. Continuities in doctrine were also apparent. In examining the Canadian Army's inter-war years, therefore, it may be helpful to begin with the end result—how Second World War doctrine was exercised in battle a few years later and then begin to work backwards. A homely, low-level, tactical incident in Italy may serve as a noteworthy example.

It was May 1944, the Battle for Rome. 1 Canadian Corps had the task of advancing along the Liri Valley, the traditional invasion route between Rome and Naples. On the right of the ten-kilometre wide valley loomed Monte Cassino. First Infantry Division deployed two brigades up, 3rd Brigade on the right, 1st Brigade on the left. First Brigade put up two battalions, the Hastings and Prince Edward Regiment right, the 48th Highlanders left. With its flank on the Liri River, the 48th was deployed in a box formation, two companies right, two left, battalion headquarters and wheeled support weapons between a dirt road that served as their centre line. It was classic advance to contact formation, with companies leap-frogging from one report line or intermediate objective to another, all controlled by the commanding officer.

The Germans were fighting a delay battle as they withdrew from their first defensive position, the Gustav Line, to their second, the heavily fortified Hitler Line about 15 kilometres behind. While the 48th moved through the scrub, the leading company on the right came under fire. They went to ground and began their battle procedure: locate the enemy, gauge her strength, engage with fire, and decide if there was a company or battalion objective.

According to doctrine, the commanding officer ordered the companies left of the road to stop and keep the line until the situation cleared. The left company commander then lost radio contact with his two leading platoons. He hollered; the commanding officer's SITREP demands grew louder, and the responses became murkier. The company commander and the commanding

officer had apparently lost control. In the meantime, without other orders, the two leading platoons simply kept going to achieve their ultimate objective, a hill overlooking a stream, arriving simultaneously while the Germans were coming in to occupy their next delaying position. A quick firefight secured the position. Having been outflanked, the other Germans withdrew.

Ironically, a technological breakdown producing a loss of higher control—the touchstones of contemporary doctrine,—created conditions for soldiers to exercise initiative and to achieve tactical success. Conceivably, they also saved lives. The battalion closed up, having saved half a day or more. The commanding officer regained his composure and recommended a Distinguished Service Order for his lead platoon commander.

Was this an aberration, or typical and representative of the army's tactical doctrine? It's always hazardous to generalize from a single incident, bearing in mind that academics argue endlessly over how many incidents it takes to make a theory. Battalions displayed remarkable initiative and innovation throughout the war—when given an opportunity. The Hasty Pees¹ at Assoro in Sicily, or the Argylls on the Caen-Falaise road are notable examples. But like the Liri Valley action, the question is whether these fit or broke the prevailing doctrinal mould. Above battalion level, doctrine seems to have exerted a dead hand. For Dieppe, personnel produced a 100 page Operation Order that contained so much detail, a brigade commander took his copy ashore because he couldn't memorize all of its contents. The Germans found this pristine example of micro-management and

called it an “Aide Memoire for a Map Exercise.” At Agira in Sicily, instead of exploiting a successful but unexpected infiltration, 1st Division withdrew its outflanking force to arrange a deliberate attack on strong points, at a considerable cost in lives. At Carpiquet in Normandy, 3rd Division sent a brigade in open formation behind a barrage across an airfield in daylight against well dug-in bunkers. At Coriano in Italy, another brigade assaulted upon one open slope and upon another behind a disappearing barrage; this signaled the assault to the defenders. Results were predictable. In the Rhineland, the Canadian Army, with a ration strength of 450,000 prepared the ground with 1200 guns, two tactical air groups, and 1200 bombers. The two assault divisions, because of flooded ground, were then forced onto the two assault divisions from a single main axis, where the 3400 available tanks could not deploy. A one-tank front is a one-tank front whether there are two or 2000 behind. Consistently, commanders had difficulty with applying their strength where and when it was most effective.

These and other instances suggest a doctrinal pattern with several characteristics. Higher headquarters produced detailed plans for lower formations and units to implement. Senior commanders preferred to attack the centre of enemy strength, notably through circles on a map, rather than outflank positions. Doctrine relied on centralized planning; highest-level control; staff management of the battlefield; reliance on indirect fire support; scant manoeuvre; and cautious exploitation. At least this is how the British Army, in 1944 characterized it:

Our own tactical methods are thorough and methodical but slow and cumbersome. In consequence, our troops fight well in defence and our set-piece attacks are usually successful, but it is not unfair to say that through lack of enterprise in exploitation, we seldom reap the full benefit of them. We are too flank-conscious,

we over-insure administratively, we are by nature too apprehensive of failure and our training makes us more so.²

Another self-criticism was that commanders frequently sent too few troops against too strong enemy positions, one battalion after another. A soldier-poet expressed it better than most:

Let’s throw in another battalion,
The Brigadier cried with glee.
Let’s throw in another battalion,
Or maybe we’ll throw two or three.
We’ve got the money we’ve got
the time,
Another battalion won’t cost us a dime.
Let’s throw in another battalion,
Or maybe the old L.A.D.³

If this is an accurate description of the British and Canadian way of war, it may be instructive to trace its roots. The Great War, that momentous clash between romantic attitudes and industrial technology, seems a reasonable period to examine. It was the era of the cult of the offensive which assumed that packed lines of soldiers could overwhelm defensive positions with sheer dash and élan. As it turned out, however, courage and discipline could only get so far against barbed

wire and well-sited machine guns. The four-year defensive stalemate followed, with each side now trying to outlast the other in an attritional struggle of high explosives.

Operational-level possibilities to break the impasse were scarce. The British tried at Gallipoli but the gap between operational conception and tactical implementation was too wide. Amphibious doctrine had not advanced beyond the Crimea or Walcheren a century earlier. On the Western Front, neither side was able to penetrate the other’s lines deeply enough to reach what were possibly the only feasible operational-level objectives—the lateral railways that allowed the quick movement of reserves from front to front.

Each side experimented with tactical measures to nudge lines forward. Canadians developed a reputation as patrollers and as trench raiders. They also adapted platoon-level tactics effectively at Vimy Ridge. Their major innovations, however, were in gunnery, including aerial observation and counter-battery. Improved communications gave the means to concentrate and to move gunfire quickly and effectively. Massed gunfire required close management of the battlefield. Start lines,



Innovation at work. As in Germany, Canada conducted armoured training and trials with mock tanks, albeit with spectacularly different results. Here one such vehicle built using a Model A Ford car, is used by the King’s Own Calgary Regiment to practice “amphibious” landings. (Courtesy KOCR Museum)



The machine-gun platoon of The Royal Canadian Regiment in their new Carden-Lloyd Carriers at London, Ontario, April 1933. Mechanization commenced in 1929 when three artillery batteries received vehicles. In 1931 and 1932, 12 Carden-Lloyd Carriers were provided to the three permanent infantry battalions, and in 1934 the Cavalry received two armoured cars. Eventually these modest, but relatively impressive attempts at mechanization included six “tank” battalions, four armoured car regiments, three mechanized cavalry regiments and a tank school. All that was needed were the vehicles. (NAC C30956)

report lines, boundaries, intermediate objectives, exploitation lines and other staff means of control gridded the battlefield.

Technological and organizational improvements did not entirely displace familiar attitudes. Closely following the straight lines of massed gunfire were massed lines of soldiers. The barrage became the arbiter of tactical movement as part of the doctrinal premise that artillery destroyed and that infantry occupied.

Sometimes the doctrine worked, sometimes not. Coordinating the movement of men with gunfire remained unpredictable. While the mechanistic movement of gunfire could be timed, measured, managed, and controlled, the movement of men on rough ground struggling through barbed wire and mangled terrain could not. Too often, the barrage moved on inexorably, leaving the infantry alone to face a front of machine guns. A striking image of this style was the Royal Newfoundland Regiment which advanced at Beaumont Hamel as carriers of 50 kilogram loads to occupy positions in which there were supposed to be only dead Germans. There were enough of them left to kill or to wound ninety per cent of the battalion in half-an-hour.

Nonetheless, the doctrine took powerful hold, and the relationship between the underlying technological and human factors is unclear. At least some senior commanders doubted either the ability or the will of their soldiers to do more than follow sheets of gunfire. Nineteenth century legacies of formed squares lingered which kept soldiers from going to ground or from taking off. Even the advance in 1918 from Arras to Mons during the last 100 days was a measured move to successive, limited objectives governed by the same tactical doctrine. Projecting forward, recent scholarship has suggested that General Montgomery’s Second War tactical doctrine, modeled on El Alamein’s theory that massed gunfire and limited manoeuvres prevent subordinate commanders and their soldiers from operating more flexibly. It’s unclear whether technological or human factors drove the doctrinal process.⁴

This was the doctrine that the Canadian Expeditionary Force (CEF) brought home at war’s end. There seemed no need to question it in the two-decade pause, until the next phase of the world war began. After all, it had won the war, hadn’t it? Moreover, the tenor of the times was distinctly unmilitary. Social and political context is important, and in

many ways its uncertain nature then resembles Canada today, even if the major players and the specific details differ. For instance, social change, ideological divide, political fragmentation, and tenuous sovereignty have paralyzed policy-making. The ghost of the 1917 conscription crisis divided the country. Demographics moved Canadians from farms to cities. War had awakened social consciousness. Ethnic and ideological differences tore the political process apart in a familiar way: regional discontent; and western protest movements becoming or avoid becoming parties; a distinct Quebec presence; and a tenuous federal government. National consensus for any national policy initiative, including military ones, was rare. These were the good times of the roaring twenties. When the Great Depression grabbed the country by the neck, the thirties were worse. In the midst of all this, Canada became a sovereign country, at least constitutionally. The old struggle between North American geographical realities and emotional ties to Great Britain entered an even more difficult phase.

Canada’s military forces were caught in the midst of all this. What was a soldier, an army, to do? With the CEF rapidly demobilized, its veterans were left pretty much to fend for themselves. The tiny Permanent Force was left to define a politically and socially acceptable rationale for its existence. The aid of the civil power to intervene in strikes was a role, but hardly a unifying one. External enemies were indistinct. For a time, planners focused quietly on what they perceived to be the primary threat, an attack by the United States. Collective action through the League of Nations was a dubious possibility, participation in British-led imperial interventions another. Lacking a national strategic consensus, and with no credible enemy to fight, public support for military forces was difficult to sustain. Representations to the government for defence funding were easily countered with references to the British “Ten Years Rule” which assumed that there would be no war for a decade. Why spend scarce funds on something that was not needed?

With only the vaguest conceptions of autonomous national interests to defend, Canadian military options remained inherently associated with Canada's position in the British Empire, formerly the Commonwealth. But commitments to questionable imperial entanglements were politically suspect, if not terminal. The airforce was the only safe national service. Throughout the twenties, the airforce did valuable practical service by flying off inland waterways, and above all, devising an aerial mapping programme which opened up the north for exploration. When rearmament began in 1937, the Royal Canadian Air Force's primary role of home defence gave it priority on resources.

In contrast, the navy was hopelessly anglophile, seeing itself as a detached component of the Royal Navy. The army was not much purer because overseas deployments had an imperial taint. Yet imperial standardization—interoperability in today's lexicon—was the structure of the army's existence. A Commonwealth expeditionary force required common organizations, weapons, equipment, and training manuals. It also needed common thought, attitudes, and doctrine. The Imperial Defence College set the premises, and Camberly and Quetta filled in the blanks to standardize staff procedures. One officer described how:

The war establishments of our units and the composition of our formations were precisely those of the British Regular Army. All our manuals were British and so was our tactical training. Practically all our equipment had been obtained in the United Kingdom To qualify for higher rank our permanent force officers were required to sit for examinations set and marked by the War Office. Our army was indeed British . . . with only minor differences imposed on us by purely local conditions.⁵

The War Office supplied the Army Headquarters with a continuous stream of policy and intelligence information, making it better informed than the newly formed Department of



Old habits die hard. During the inter-world war period, debate over mechanicalization began in the early 1930s, but was limited to two individuals writing in *Canadian Defence Quarterly* and a small group of other officers. For most, life continued much as it had. Here, members of The Royal Canadian Dragoons exercise near Camp Borden in 1938. (Courtesy RCD Museum)

External Affairs which was attempting to formulate a national foreign policy. Relations between them were sometimes strained.

Canadian officers were naturally caught between their national and imperial inclinations. Meanwhile, their British army colleagues were attempting to define *their own* rationale. That story has been well documented. Strategically, the British couldn't fully decide between Europe and the Empire. Operationally, Fuller and Liddell Hart fought the army establishment over doctrine: attrition or manoeuvre, or direct or indirect approaches. Tactically, tank and other reformers fought those who still assumed that the machine gun had no stopping power against a well-bred horse. British officers debated actively about these issues among themselves; both traditionalists and critics claimed to represent the army's best institutional interests. However, looking on from the other end of the telescope, Canadian officers were in an awkward position. Siding with the critics smacked of disloyalty to British official policies which were the touchstone of their professional existence. Innovation and change were suspect. As a result, Canadian reaction to British doctrinal differences, tended to favour the conservative, the traditional, the familiar, the status quo.

External forces—the absence of national strategic policies and imperial standardization—inhibited innovation in the interwar army. There was little military purpose to channel change. When the CEF's corporate memory of combat faded, mere institutional survival seemed an achievement, and the state of the army's training makes dismal reading. Battalion level units with companies scattered across the country could rarely concentrate, let alone combine in formations. Lack of basic tactical skills cancelled summer concentrations altogether. The army found bureaucratic solace in its own administration. With mere survival as its principal objective, there was little energy left for idle speculation about how an army might be required to fight in the future. When 1st Division reached Britain in 1939, soldiers began their training in replica trench systems not unlike some of those they had left in Flanders twenty years before.⁶

In their superb account of service change, Williamson Murray and Allan Millet identify significant developments in the interwar years that affected the course of the Second World War: armoured, air, and submarine operations, amphibious warfare, and signals technology.⁷ They also suggest several factors, some external, others internal, that influenced armies either to change or stagnate. Their analysis offers a helpful grid to gauge the Canadian case.

Unsurprisingly, the Canadian Army was not among the innovators in the period. It was unrealistic to expect that a 400-officer army lacking a strategic purpose could have been an institutional instigator of change, innovation, and reform. Moreover, imperial standardization, and interoperability inherently inhibited independent development. Organizations, weapons, command styles, staff procedures, and doctrine had to fit British Army models if the coalition was to function. As a junior partner dominated by a greater power, there was little scope to initiate and to promote change even if there had been a will to do so.

Internal factors also encouraged inertia. Murray and Millett emphasize the vital importance to innovate an institutional culture that will at least tolerate if not actually support it. They cite two forms of change. One is revolutionary, promoted by a strong leader in the way that Air Marshal Dowding transformed the air doctrine of the Royal Air Force, which likely saved Britain from defeat. The other is evolutionary or incremental, “involving organizational cultures, strategic requirements, the international situation, and the capacity to learn realistic, honest lessons from past as well as present military experience.”⁸

The Canadian Army did have a revolutionary commander throughout the interwar years. General A.G.L. McNaughton dominated the military establishment and his influence extended far beyond: running imperial conferences; heading the National Research Council; and managing the government’s major unemployment relief project in the depression. He fashioned an army in his image. His priority was formal education in the sciences and engineering, because trained engineers could manage the technology with which the next war would be fought. Personnel policies reflected this perspective, favouring formal academic qualifications over demonstrated leadership. Proportionately more of them went to Staff College and then to the Imperial Defence College. Many had little or no command experience, and upon

return, the qualifications were awarded to the staff rather than to troops. In the army’s mobilization plan, just one of six brigades was to be commanded by a regular infantry officer, and 14 of the 19 senior staff positions were filled by gunners and sappers.

Under his aegis, a small group of these intelligent and dedicated staff officers periodically switched postings and wielded considerable influence. If their writings are at all indicative, their main interests lay less in common soldiering than in grand strategic spheres. Their Staff College and IDC papers discussed how national and imperial interests might be harmonized. This was also the theme of the essay contest sponsored in 1930 by the *Canadian Defence Quarterly* (CDQ). It noted that given the three pillars of Canadian obligations—to the League, to the Commonwealth, and to national defence: “Discuss the roles which should be assigned to the armed forces of Canada, indicate the form which these forces should take and outline the organization required.” The joint winners were an historian and militia officer, Lieutenant C.P. Stacey, and a staff officer, Major M.A. Pope.

The essay contest reflected much of the CDQ’s content in these years. Its pointed editorials covered a range of foreign and strategic affairs. How reflective they were of army opinion as a whole is impossible to say, but they are at least a useful snapshot of some patterns of thought. Central was a view that notions of a peaceful world were naïve. The Japanese were right to clobber China. War was inevitable and countries had to be ready to fight them. Disarmament was folly and the League of Nations wrong-headed, “anathema to the Anglo-Saxon mind”. Pacifists, idealists, collectivists, and isolationists were dangerous. The writer lamented that in Canada “any person who is so misguided as to devote any time to the study of war is deemed to be a prospective inmate of the nearest lunatic asylum . . .” These hard-nosed views were tendentious and possibly overstated for effect. They may have been intended to counter another, diametrically opposed perspective of

Canada’s role in foreign and military affairs: that Canada should stand independently of Britain and advance its own national interests through collective action. It’s a familiar theme.⁹

This small group of officers made a significant contribution to the army’s fortunes. Their mobilization plans laid a foundation on which the wartime force was built. It was a remarkable achievement, managing growth from a few thousand to a few hundred thousand soldiers in a couple of years. There was a certain irony in their evident pre-occupation with highest-level strategic policy matters. In war, these officers, now of general rank, had no part whatever in high-level strategic decisions. As commanders, they functioned only at the tactical level, and it is not apparent that they had given much thought to how the army might fight the looming war other than the way they had done in 1914-18. They seem to have taken doctrine, and the human factors that underlie it, for granted, and not needing serious study.¹⁰ James Eayrs’ comment is apt.

The military in Canada has thus produced its share of soldier-diplomats and soldier-intellectuals. But it has produced no soldier-strategists. There are no Canadian Douhets or Slessors, no Fullers or Liddell Harts, much less any Canadian Clausewitzes or Mahans. The reasons for this deficiency are complex: they have to do with the unimportance of Canada as a military power, the difficulty of defining a strategic role, the unattractiveness of the military profession for intellectuals, and, above all, with the fact that the nation’s non-military intellectuals, until perhaps very recently, might be numbered on the fingers of a severely mutilated hand.¹¹

It has become common place now to observe that constructive changes to how armies prepared to fight the coming war came only from systematic study of historical experience. As Murray and Millett phrase it:

In the interwar period, military organizations on three continents worked out the operational possibilities presented by the tactical and technological adaptations of World War I. To succeed at this demanding task, combat theoreticians needed a clear understanding of what had happened in the last year of the war and why. Whenever military institutions and innovators attempted to jump into the future, without or with little regard to the historical record, their efforts proved to be dangerously misleading.¹²

Canada's interwar army was not inclined to study history, or to specifically analyze its Great War experience and draw inferences that might lead to change. The official history got hopelessly bogged down. The CDQ published anecdotal accounts but with little critical analysis. One, by a company sergeant major on leadership, had the seed for doctrinal change,¹³ but few were inclined to question received wisdom. When the *British Army Quarterly* published an officer's critique of his army's Great War tactical doctrine, the CDQ's editor responded strongly, writing that the author had indulged in a "critical orgy.... [that was] anything but reasonable and most certainly not founded on fact." Any tactical errors in the Great War were not due to "faulty doctrine but to an erroneous

application of doctrine." He particularly objected that "we are asked to adopt the German method of excessive decentralization which failed so lamentably in 1918."¹⁴ Conventional views of Great War precedents, he concluded, were therefore sound.¹⁵

Much has been written in recent years comparing the British and German responses to the Great War. Winners and losers drew different conclusions from it. Clausewitzian genes drove the Germans to a systematic and to a detailed intellectual examination of the dynamics of the war, especially its late stages, as the master had done with Napoleon's campaigns a century before. Their hard-eyed study produced new doctrine, organizations, weapons systems and command methods. Doctrine accepted the inherent chaos of the battlefield and attempted to exploit it. British and Canadian commanders saw little need to study the war seriously, looking only to confirm presumptions, not to discover truths. It was self-evident that the right doctrine had won the war, so there was no need for change. Instead of exploiting chaos, they preferred to manage it.

Two other comparable historical explorations drove doctrinal change in the 20th Century. The Soviet army looked deeply into its varied past,

found the operational level of war, and applied it with devastating effect from 1943. A generation later, American forces searched their Vietnam ghosts for reasons why they could win all tactical battles and lose a war. Only the past held the clues. Some detected imperial overreach, as Athens had done in Sicily a couple of thousand years earlier. Others looked to Jomini, but, especially, to Clausewitz. They applied his analyses to twentieth century wars, and found the operational level and *auftragstaktik*. Both contrasted with Anglo-American practices. American doctrinal adaptations led to NATO standardization, and on to Canada. A decade ago, the Canadian Forces Staff College introduced the operational level of war into its curriculum. Since then, doctrinal manuals have tried to balance Jomini's structural principles with Clausewitz's flexibility, traditional means of control with mission command, and with other incompatibilities. Interoperability, the current version of imperial standardization, once again has been the primary driving force of the new doctrine. The cycle continues.



ABOUT THE AUTHOR...

Dr. Bill McAndrew enlisted in the Canadian Army in 1951 at age 17, was commissioned the following year, and joined the 2nd Canadian Rifle Battalion which later became the 2nd Battalion Queen's Own Rifles of Canada. His twelve years of regimental service included tours in Korea, where he was for several months a Liaison Officer at the 1st Commonwealth Division Headquarters, in Germany and with the Canadian Army Training Team in Ghana. He retired in 1963 to attend York University After gaining an Honours BA in history, Dr. McAndrew did post-graduate work at the University of British Columbia. While completing his doctoral thesis on the impact of the 1930's economic depression in Canada and the United States he taught at the University of Main at Orono, and also directed the university's Canadian studies programme. Dr. McAndrew joined the Directorate of History in 1975 and first worked on the RCAF official history project. His primary research interest is in experience of the Canadian Army during the Second World War, especially the human dimensions of battle. He has published widely on Canadian political, air force and army history.

Dr. McAndrew retired *from the Directorate of History in 1996 and currently lives in Ottawa, Ontario*

NOTES

1. The Hastings and Prince Edward Regiment.
2. Notes From Theatres of War, 1944.
3. L.A.D.—Light Aide Detachment, a maintenance organization provided by the The Corps of Royal Canadian Electrical and Mechanical Engineers.
4. See, for example, Michael Howard, in Richard Kohn (ed), "The Scholarship on World War II: Its Present Condition and Future Possibilities," *Journal of Military History*, 55 (July, 1991); David French, "Tommy is No Soldier": The Morale of the Second British Army in Normandy, June-August 1944," and Stephen Hart, "Montgomery, Morale, Casualty Conservation and 'Colossal Cracks': 21st Army Group's Operational Technique in North-West Europe, 1944-45," both in *The Journal of Strategic Studies*, 19 (1996); Bill McAndrew, "The Soldier and the Battle," in J.L. Granatstein and Peter Neary (eds), *The Good Fight* (Toronto: Copp Clark, 1995).
5. LCol Maurice Pope, quoted in James Eayrs, *In Defence of Canada: From the Great War to the Great Depression* (Toronto: University of Toronto Press, 1964).
6. The best description of the army's professional development, or lack of, in these years is in Stephen J. Harris, *Canadian Brass: The Making of a Professional Army, 1860-1939* (Toronto: University of Toronto Press, 1988).
7. *Military Innovation in the Interwar Period* (Cambridge: Cambridge University Press, 1996).
8. *Ibid.*
9. See Eayrs, 62-148; Serge M. Durlfänger, "The Canadian Defence Quarterly, "1933-1935: Canadian Military Writing of a Bygone Era," *CDQ*, 20, (June, 1991).
10. A similar inattention to human and doctrinal matters is apparent in the recently published collection by senior officers in Bernd Horn and Stephen J. Harris (eds.), *Generalship and the Art of the Admiral*, (St. Catherines: Vanwell, 2001).
11. Eayrs, 104.
12. Murray and Millett.
13. Sergeant-Major Instructor E.J. Simon, R.C.R., "Discipline and Personality," *CDQ*, 2, 1924.
14. Quoted in Eayrs.
15. There are ways to learn from experience, and ways not to as the following analysis by the RAF Air Staff suggests. "[The airforce] can either bomb military objectives in populated areas from the beginning of the war . . . or alternatively, they can be used in the first instance to attack aerodromes with a view to gaining some measure of air superiority... The latter alternative is the method which the lessons of military history seem to recommend, but the air staff are convinced that the former is the correct one." *Ibid.*



For years, the militia camp at Niagara provided a venue for soldiers to learn their craft. The 13th Battalion, Volunteer Militia Infantry is shown here on parade at Niagara Camp in the summer of 1871. (Courtesy National Archives of Canada PA-28627).

“Die Gedanken sind frei”: The Intellectual Culture of the Interwar German Army

by Professor Rob Citino, Ph.D.

INTRODUCTION: CONSTRAINTS

The question is deceptively simple: how can a peacetime army stay prepared for war? On the surface, the daily routine of peacetime duty and the stresses and strains of war-fighting could not be more dissimilar. We may even say that the more an army becomes used to the former, the less fit it may be to carry out its duty in the latter. However, the experience of the German Army between the two world wars suggests that this is not necessarily so. While Isaiah promises that one day the nations of the earth will “study war no more,” the peacetime army must make a habit of it. This short paper will examine the study of war in the interwar German army (*Reichswehr*), looking carefully at its leading military journal, the *Militär-Wochenblatt*, in order to draw some conclusions about German military culture during the period.¹

Every modern army has to undertake planning within certain constraints. There may be unsympathetic, or overtly hostile, political leadership; or lack of interest on the part of civilian society; or budgetary “of modern equipment. The “unconstrained scenario,” in which armies may choose their force levels, weapons, and personnel, may be a useful planning tool, but it is also a fantasy. The set of constraints under which the *Reichswehr* operated, however, were unique in the history of the 20th century. The disarmament clauses of the Treaty of Versailles left Germany with an army of only 100,000 men (of whom no more than 4,000 could be officers). It dictated the organization

and armament of the force: seven infantry and three cavalry divisions, without any “offensive weapons” such as tanks, aircraft, or heavy artillery. It prohibited conscription, so that the force was to consist solely of long-term volunteers (12 years for the men, 25 years for the officers), stipulations that theoretically made it impossible for the Germans to accumulate a trained reserve. It abolished the Great General Staff, as well as the *Kriegsakademie* that had produced its members. And finally, in a move that could not help but have an impact on military readiness, The Treaty of Versailles saddled Germany with an enormous reparations bill; at the same time, its territorial clauses removed a full 30% of the German national tax base.²

And yet, despite all the constraints that politics and economy may place on an army, thoughts are free. They are free in the sense of costing nothing, not an inconsiderable factor in times of tight spending, but also free in the sense of being unconstrained by nature. Versailles could disarm Germany physically, a process that extended from breaking up German tanks to closing down the German staff college, but it failed miserably at disarming Germany mentally. A foreign observer at the *Reichswehr’s* 1924 fall manoeuvres made this very point. Having just witnessed five days of intense mobile warfare in which Blue and Red forces were aggressively seeking each other’s flanks and were rearing in a highly realistic wartime scenario, U.S. Colonel Allen Kimberly ended his dispatch to the War Department by noting that Germany was to all intents and purposes, disarmed by the Versailles treaty, {and} “her brains were far from disarmed.”³

OVERVIEW: FROM THE PAGES OF THE MILITÄR-WOCHENBLATT

German officers of the interwar period often mention the Thursday arrival of the *Militär-Wochenblatt* as one of the highlights of the week. At first glance, it does not impress. Containing just sixteen pages of double-column newsprint and minimal illustration, rarely more than a map or two, it strikes the modern eye as a very modest package indeed. Its format rarely varied, although like Germany itself, it did expand during the Hitler period. A typical issue opened with a relatively long lead article followed by six or seven shorter pieces, as well as a series of brief regular features.⁴ But within this unassuming format lay a penetrating analysis of modern war, penned by some of the best tactical and operational minds in the world, most of whom did not even sign their work. The discussion ranges widely from the most pressing military issue of the day (mechanization of the army) to new forms of organization and new weapons, with a strong dash of operational military history thrown in. The writing is of uniformly high quality, the reasoning sound, and the analysis crisp.

A glimpse at the contents of a single issue of the *Militär-Wochenblatt* is instructive. The January 11th, 1932 issue opened with “The Last Two Hundred Meters,” by Austrian Lieutenant Colonel Lothar Rendulic. It analyzed the basic problem of infantry shock tactics since the Boer War: getting across that last stretch of fire-swept ground. Rendulic argued that the problem needed to be seen in a broader context. First of all, it had never been the task of the infantry



General Hans von Seeckt was the key individual in the creation of Germany's interwar tactical doctrine. He served as General Staff Chief in 1919 and 1929 and as the Army Commander from 1920 to 1926. By the time he left, the Reichswehr had a clear standardized battle doctrine and theory of future warfare that changed only slightly by 1939.

alone to make that crossing. Rather, it was the work of combined arms: infantry, artillery, light and heavy machine guns, mortars, and grenades. Secondly, it was a mistake for the infantry to limit its thinking to breaking into the enemy line; it had to be ready to break through into the depth of the position. For this, the support of tanks and aircraft was absolutely essential. To Rendulic, the assault was meaningless unless it was a prelude to operational manoeuver.

Lieutenant General Fleck followed with the second installment in a two-part article entitled "The Empty Battlefield," by now an old and well-established term in military writing. The general reminded his readers of the appearance of the battlefields during the war's trench years: "We saw not an empty battlefield, but a boiling and seething one, where a hurricane of steel and lead forced everyone to the ground—and here and there small groups of men advancing from shellhole to shellhole." Toward the end, tanks and aircraft made their appearance. A

large portion of the *Reichswehr's* officer corps and virtually all of its manpower had not experienced either reality. Recent exercises had borne this out, he argued, with too little attention being paid to march security and to remaining unseen by the enemy. There were far too many helmets gleaming in the sun, field kitchens belching smoke, batteries establishing themselves on nicely silhouetted ridge lines. The army had to take special care to stage realistic exercises, since it was using flags, banners, and star-shells in place of real weapons and units. It was the cry of numerous German officers during the period, most notably from the Chief of the Army Command, General Hans von Seeckt.

An anonymous offering, "Fateful Questions of the Conduct of the War, 1915-1917" followed, the latest salvo in a bitter debate then raging in army circles over the recently published memoirs of General Max von Gallwitz, one of wartime Germany's most distinguished army commanders. Gallwitz criticized the High Command under General Erich von Falkenhayn for having "done nothing at all" in the West in 1917 ("*gar nichts getan*"), and for spending the entire year sitting passively on the defense. His criticism had elicited a number of vigorous counterarguments. His foes in the debate pointed out that Germany had attacked in that year: the Caporetto offensive in Italy and the Riga offensive in Russia, and that no army could attack everywhere, all the time. This article attempted a synthesis of the two sides. "Such contradictory views of the question are unusually valuable for the reader who tries to read military history objectively," wrote our anonymous author, "in other words, as the French say, for one who seeks information (*enseignements*) and not lessons (*enseignements*)." The author argued forcefully that while a strategic defensive was in order, the German Army could have punctuated it with attacks on limited objectives, rather than have the men bear the horrors of a year-long passive defense against superior Entente materiel. He granted that the war had opened the

eyes of those who preached the non-stop offensive in 1914. The other side of the coin was equally valid, however. A defensive that constructed around "rigid immobility" was no path to victory, either, since it allowed the enemy to develop his attack in the strongest possible fashion. It is a sober analysis, fully equal to any scholarly work on the subject since then.

The other articles form an eclectic mix. An unsigned article on German disarmament compares the 1913 military establishment to that of 1931. It traced Germany's descent from an army of 786,000 rifles to one of 100,000, in order to stress that disarmament was possible, that Germany had proven it was possible, and that all that was now lacking was the will of the Versailles treaty's other signatories to follow suit. Lieutenant General Marx follows with a response to a previous issue's article on horse artillery, which argued that it was necessary to drill the batteries "at a gallop." The previous article had given examples from the war of how valuable well-drilled horse artillery could be. Marx points out, politely, that all the examples seemed to be taken from the manoeuver phase of the war, especially in early 1914. The rest of the war was full of example of batteries flying towards positions at full gallop and being destroyed even before they could get into action.⁵

This brings the reader to the regular features section. This issue's "Tactical Exercises" offers a particularly full plate: a divisional exercise based on the German fall manoeuvres of 1930; a Czech army problem on the use of motorized columns to transport troops; and a Red Army problem dealing with reconnaissance by Polish cavalry in the Russo-Polish War. "Armies and Navies" brings news from England, where budget tightening measures were threatening British readiness, according to an article from Captain Basil Liddell Hart in the *Daily Telegraph*: from France, the new "Pioneer Field Service Regulations" had just appeared which, stressed the importance of pioneers having their

own heavy machine guns; from the Soviet Union, the Red Army was experiencing difficulties in artillery-infantry cooperation, and was also working on plans to deal with an enemy blockade in a future war; and finally, from the United States, the construction of two new aircraft carriers had just begun.

“From the Military Journals” offers a fascinating range of materials in this issue: an article in the Austrian journal *Militärwissenschaftlichen Mitteilungen* on the uneven results of thirteen years of disarmament; a descriptive review of the contents of the most recent issue of the *Revue Militaire Française*, which contained a highly critical article of General Erich von Falkenhayn’s conduct of the war; a review of the most recent issues of two Italian military journals, *Esercito e Nazione* (containing a lengthy article on “The Aerial Offensive”) and *Rivista militare italiana* (featuring an article by General Bastico on “The Approach March in Mountain Terrain”); and, finally, the most recent issue of the Czech journal *Voyenske Rozh-ledy*, featuring one article on the employment of air forces, and another by Lieutenant Colonel Trutnovsky on the evolution of German doctrine since Frederick the Great—or rather, the lack of evolution. “Instead of what one might expect from a defeated army,” Trutnovsky argued, “the German high command has not changed its doctrine since the end of the war.”

The same broad reach is clear from a glance at particular themes during the year. The treatment of foreign armies, for example, becomes impressive as one moves through volume CXVI (1931-32). There are articles on the preparation of new Polish field service regulations, several on new tactical and organizational directions in the Polish Army, and a discussion of the continued existence of armoured trains in Poland’s arsenal.⁶ There is a series of articles on three newly issued regulations in the French army, as well as an article on the French Ministry of National Defence and one on military training for French youth.⁷ The Czech army is

the subject of articles on the state of its personnel, on contemporary debates within its ranks on organization, doctrine, and weaponry, and on the Czechs who also contribute numerous tactical exercises.⁸

While these three powers were Germany’s likeliest opponents in any near-term war scenario, the coverage ranges far beyond them. There is a study of organization and tactics of the Romanian Army; two analyses of the various paramilitary organizations in Fascist Italy, including an evaluation of the effectiveness of the Fascist militia and its cooperation with the Italian Army; an article on the language question in the bilingual Belgian army; an analysis of new Russian artillery regulations, as well as a listing of military publications in the Soviet Union for that year; a discussion of the ROTC program at the University of Oklahoma; an instructive and, as it turns out, prophetic piece on the Finnish Army’s principles of defensive warfare, in addition to a piece on the forthcoming reorganization of Finnish forces; an analysis of the Iraq Army; and a discussion of the reorganization of the Spanish Army. In the wake of the occupation of Manchuria, there are detailed orders of battle for both the Japanese and Chinese armies, as well as an article on Japanese artillery. This is not an exhaustive list, either, for within numerous articles on doctrine and military history, as well as in book reviews, there is a great deal of relevant information on foreign military establishments. No student of any army of the interwar period should ignore the *Militär-Wochenblatt*; it is an indispensable source for the day’s military developments.

A similar breadth characterizes the articles on military history. Virtually all deal with warfare on the operational level: divisions, corps, and armies. “Dispatching a Deployed Division to the Flank” deals with the advance of the 4th Bavarian Division through France during the “race to the sea” in September 1914.⁹ In a single morning, the division launched

an attack, disengaged, and then had to march to its left flank to come to the assistance of the 3rd Bavarian Division, its partner in the II Bavarian Corps. It is a very instructive piece that warns of the ease with which such manoeuvres are carried out in peacetime exercises, and how difficult they can be in actual war. “Cavalry in a Flying Column”¹⁰ analyzes the advance of a concentrated Russian cavalry division into Galicia in August 1914. The Tannenberg campaign received intense study, since the German high command still viewed it as normative. One article dealt with German aerial reconnaissance in the campaign, crucial in trapping and destroying the Russian 2nd Army; another dealt with the often underestimated operational significance of the East Prussian fortifications in the campaign; a final one uses the second article as a point of departure to investigate “Field Fortifications in the Service of Operations.”¹¹ There are articles on the German amphibious operation against the Baltic islands in October 1917; the French attack along the Ourcq on 6 September 1914, the opening of the battle of the Marne; and the role that American troops played in the war in 1918, entitled “America Decides the War.”¹² One of the deans of modern military history, Michael Howard, wrote in 1993 that, while there was a huge amount written on the First World War, he did not know “a single satisfactory operational account of it.”¹³ A good editor could fashion one out of the pages of the *Wochenblatt*.

Perhaps the most interesting area of all are those articles, usually comprising the journal’s lead, deals with what the Germans call “the high conduct of the war.” Colonel von Mantey’s article on the “The Core of Schlieffen’s Teaching” defends the architect of the 1914 campaign from charges of “one-sidedness” in his insistence on flanking and enveloping operations. Mantey argues that Schlieffen, like Moltke before him, eschewed any rigid solution, or schema, for the conduct of war. Rather, he aimed solely at the destruction of the enemy (“den Feind zu Vernichten”). If it could be

achieved relatively cheaply, through envelopment and flanking, so much the better; if it required a bloody frontal assault, he was prepared to accept that as well. In an article entitled "Pyrrhic Victories," another anonymous author offers thoughts on "the casualties question," asking whether modern armies might become so casualty-shy that they lose their combat effectiveness—a timely piece for the early 21st Century. An unsigned article on "cordon strategy" is as fine a statement of German operational art as one can find. It contrasts the conduct of the Great War, featuring continuous lines held by troops of indifferent quality and backed by strong reserves, to "decisive operations," large units manoeuvring freely in open terrain. It reaches a synthesis by arguing that "a cordon strategy" can be suitable, but only if it allows the commander the opportunity to concentrate superior strength for aggressive, decisive operations.¹⁴

IN-DEPTH LOOK: TACTICAL EXERCISES

An in-depth look at one item published in the *Wochenblatt* yields equally impressive results. In the fall of 1924, a series of tactical exercises appeared, drawn up by Lieutenant Colonel Friedrich von Cochenhausen of

the *Truppenamt*, the disguised General Staff. They dealt with *Bewegungskrieg*—the war of movement, in this case, the handling of an infantry division "during a continuous campaign."¹⁵ Their aim was to give an officer practice in making decisions and giving orders. Cochenhausen's solutions were not, he stressed, to be taken as perfect answers (*Patentlösungen*) to the problems posed, but rather as indications of suitable methods to be used in such situations.¹⁶

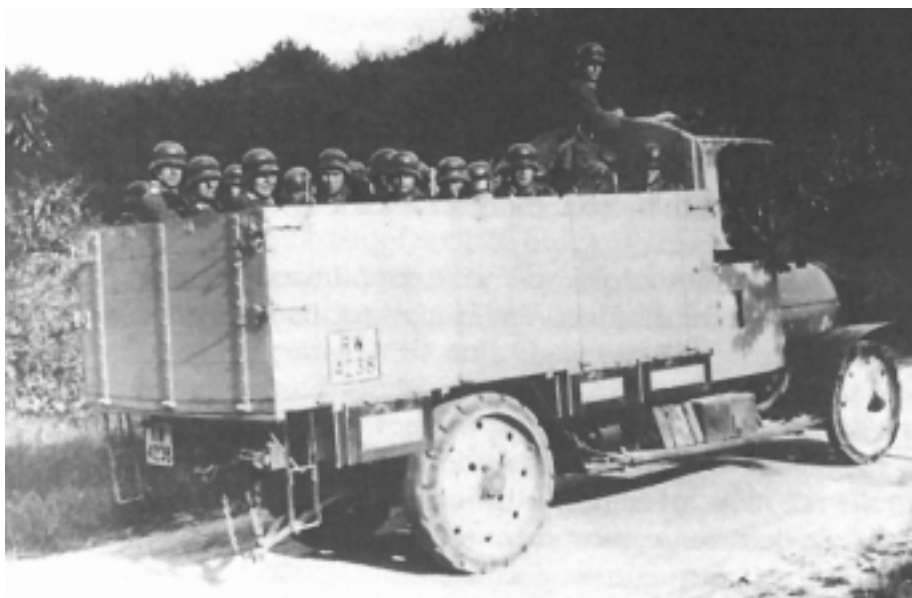
The eleven exercises began by describing a realistic wartime situation. The Weser river formed the boundary between a Red state in the west and a Blue one to the east.¹⁷ The mission of Blue's II Army Corps was to prevent Red from crossing the Weser. According to reports from friendly aviators, a long column of unspecified vehicles was approaching the river, and there were also reports of enemy planes violating Blue airspace.

The commander of Blue's II Corps now sent orders to his 6th Infantry Division to move up to the Weser between 5th Infantry Division (on its right) and 3rd Cavalry Division (on its left). The divisional commander also received reports from a local garrison unit (the 15th *Landsturm* Regiment) to the effect that a Red crossing of the Weser was imminent.

Red patrols had already tried to cross, in fact, but the regiment's 1st Company had beaten them back. There had been fighting near the town of Ohsen, and the bridge over the Weser there had been destroyed. A long column of cavalry had also been spotted on the far bank. Red was clearly superior in the air and seemed well equipped with modern heavy artillery and tanks. The exercise required the commander of Blue's 6th Infantry Division, first, to give his estimate of the situation and the terrain, and second, to issue the appropriate specific orders.

Cochenhausen's solution began by identifying Ohsen as Red's operational *Schwerpunkt*, or point of main effort. Defending it was a problem. Cover on the far bank served to protect Red's approach march and assembly. There was only a tiny Blue garrison in the town, and contrary to reports, the bridges there had only been damaged, not destroyed. If Red could establish a bridgehead by this evening, it would be difficult to force him back. Blue therefore had to dispatch a strong force to Ohsen at once. It would be a tough march for troops, who were just now in the process of moving up to the Weser, but exertion now might save them from difficult fighting later on. Available troops included 6th Division's advance guard: 1st Battalion of the 16th Infantry Regiment; half of the 6th Reconnaissance Regiment; and a battery of artillery.

The deployment of the rest of the division depended on what happened at the Weser. If the units rushing forward so hastily failed to throw Red back across the river, the main body of 6th Division would have to ready itself to launch a deliberate counterattack on the Red bridgehead. If the initial units succeeded in forcing Red back over the river, the entire division had to form up in depth in order to be ready to oppose any new attempt to cross. The divisional commander could best meet both of these scenarios by concentrating his division a few kilometers away from the river bank, at Lauenstein. Divisional staff, Cochenhausen stressed, should draft both orders at once, so as to be ready to move quickly.



A German mock tank being assembled by Transport troops in the later 1920s. (Courtesy U.S. Army Ordnance Museum, Aberdeen Proving Ground)

The solution went on to discuss the specific orders that Blue's 6th Division commander should draw up. They included forming a reinforced battalion-sized *Kampfgruppe* ("battle group") consisting of the advanced units mentioned above; the partitioning of the divisional battle area into sectors; and the creation of a reserve. Orders were to be clear and direct: "Any attempt of the enemy to cross is to be nipped in the bud by immediate counterthrust by the sector reserves, which are to be strongly equipped with heavy weapons."

This was then the basis upon which the next ten exercises rested. All are impressive to the modern reader, primarily for the care and precision with which Cochenhausen formulated them. They seem "real," even to the point of having moments of excitement. They instructed the officer performing them in a wide variety of problems. Problem #2, for example, began with Red forces over the bridge (incompletely destroyed, as feared) at Ohlsen. Blue forces counterattacked them there, led by 1st Battalion and a cyclist company.¹⁸ Using the advantage of surprise, and cooperating with fire from the 4th Battery, the Blue attack succeeded in driving Red out of Ohlsen. Sixty prisoners, belonging to Red's 4th Dragoon Regiment, were taken, along with six machine guns and two armoured cars. The enemy "streamed back across the bridge in disorder, suffering heavy losses," and the bridge was again demolished, this time permanently. But Red had also crossed the river both north and south of Ohlsen. The more serious threat arose in the south, in the sector of the Blue 3rd Cavalry Division at Börry. Red took the village, which was garrisoned by *Landsturm* units, and then drove on into the Blue interior. At this point, 3rd Cavalry Division sent a frantic wire to Blue's 6th Infantry Division, requesting assistance. The problem was: "What answer does the commander of the infantry of the 6th Division give to the commander of 3rd Cavalry Division (word for word)?"

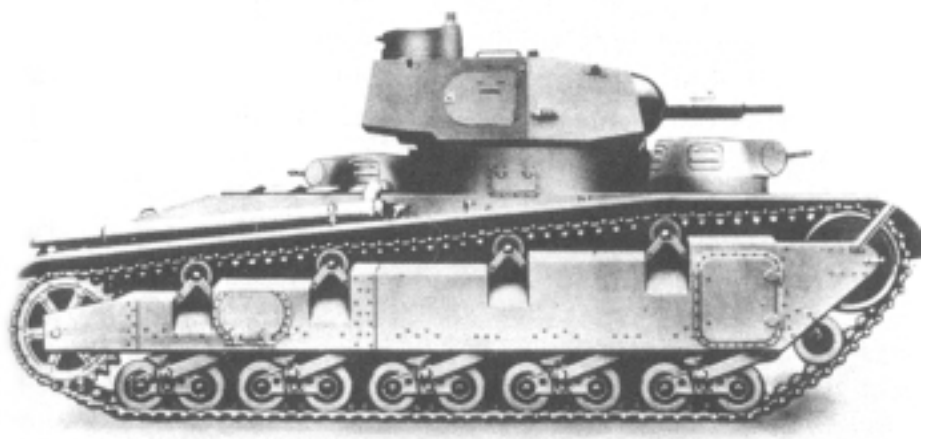
Characteristically for a German officer, Cochenhausen's solution called for 6th Division to launch a flanking attack from the north on the enemy force just across the river. The cavalry could assist first of all by not panicking, then by establishing a defensive line to prevent any rapid eastward movement by Red. In this way, Red's crossing force could be pinned in place and enveloped by the 6th Division swooping down from the north.

His description of the operation, which forms the situation for the next two problems is worth quoting at length:

At 10:50 a.m. the 2nd Battalion, 6th Artillery, the 16th Trench Mortar Company, and all available heavy machine guns of the 16th Infantry Regiment threw a violent burst of fire lasting for five minutes on the enemy's covering troops north of Börry, while at the same time the 16th Infantry Gun battery took them under point blank fire from concealed emplacements in the woods. Then the 16th Infantry dashed to the attack with two battalions in the front line. The 1st Battalion, advancing on the right, headed for Börry, overran the enemy's sentries and penetrated, almost without fighting, into the

village, which was filled to overflowing with vehicles. When the foremost portions of the battalion reached the southwestern exit of the village, two of the enemy's batteries which were in position west of Kleine Hill were bringing up their limbers to change position. They were overwhelmed by fire and captured after a brave resistance. In the meantime, the 2nd Battalion had advanced beyond Börry in a more southeasterly direction, likewise meeting with only slight resistance, and struck unexpectedly in the flank and rear of the foe engaged in combat southwest of Bessinghausen. Three to four hundred pioneers, sixteen machine guns, and several infantry guns and trench mortars were captured. The enemy sought to escape by fleeing to the south, but suffered heavy losses in doing so.¹⁹

But the exercises didn't end here. The division to the right of the Blue 6th Infantry, the 5th, had launched a poorly executed counter attack of its own versus Red troops that had crossed in its sector, near the village of Haven. Heavy casualties had shattered the unit, which was in full retreat. Blue's 6th Division now had a new dilemma: press onto the river bank and ensure the total destruction



A Rheinmetall model of a "light tractor", c. 1930. (Courtesy U.S. Army Ordnance Museum, Aberdeen Proving Ground)

of Red forces already beaten at Börry, or fall back with the 5th Division in order to cover the left flank of its retreat. The 6th Division's commander decided to disengage from the enemy and fall back, which formed the heart of exercise #5. When the flight of the routed Blue 5th finally came to a halt, the 6th Division once again turned about for an obstinate defense of a wooded ridge (exercise #6).

Exercise #7 began a new situation, with the Blue I Army Corps in full retreat towards Hannover via Minden and Rintelen, after unsuccessful battles west of the Weser. The exercise dealt with the arrival of a new division into the theatre of war, in particular preparations for the billeting of the unit. But exercise #8 found Cochenhausen back on the attack, as it were, forcing those taking the exercises to employ the newly arrived unit (3rd Infantry Division) in an assault on the flank of the advancing Red army. This counterattack formed the basis for exercises #9 through #11.

This series of exercises stands as a superb example of operational training in the interwar German army. Within the boundaries of these eleven situations may be found virtually everything a modern commander might encounter in 20th century battle: defense against a river crossing, the initiation of flanking attacks, protecting the flank of a neighbouring unit in combat; disengagement; retreat; the stubborn defense of a ridge line; insertion of new units into an ongoing battle. Cochenhausen's exercises demonstrate how well the military art had survived the Treaty of Versailles.

KEIN SCHEMA! THE INTELLECTUAL CULTURE OF THE GERMAN ARMY

While in many ways the interwar period was the age of the enthusiast, always preaching the wonders of some new weapon or doctrine, one sees very little of it in the *Militär-Wochenblatt*. A defining characteristic of German military cul-



German motorised infantry on Manoeuvres near Naumberg, 1927. (Courtesy James Corum)

ture was that officers prided themselves on avoiding *Einseitigkeit* (one-sidedness) in their discourse. Claims that this or that new weapon had totally revolutionized the art of war were simply foreign to their way of thinking. They believed that they had a perfectly good conceptual framework for understanding war, *Bewegungskrieg*, the war of movement on the operational level. It arose in the days of the elder Moltke, had been further refined under Schlieffen, and had survived defeat in the First World War. The Germans did not perceive some fundamental change in the nature of war. The nature of war was unchanging, as per Clausewitz: it was, and is, an act of violence to compel an enemy to do one's will. Rather, the point at issue in the pages of the *Militär-Wochenblatt* was how to resurrect the war of movement and once again fight campaigns of decisive victory. While the rest of the armies in the world were essentially trying to reform their tactics, the Germans were looking at war's operational level. Rather than bloody contests of attrition, where the goal is nothing more or less than the killing of enemy soldiers, the Germans continued to seek aggressive campaigns of manoeuvre, envelopment, and annihilation. It is not surprising that the only army looking for this combination in the interwar period was the one that would first find it.

Beside the stress on mobile operations, the contributors to the *Militär-Wochenblatt* had another article of faith: mobility could only be restored through the combination of all weapons working in harmony. Warfare could still aim at decisive results, but only on a combined arms battlefield. There was no mechanization debate in Germany; machines had become indispensable. The light mortar, light and heavy machine guns, motorized and mechanized vehicles of all sorts—tanks, trucks, armoured cars, motorcycles, gun carriages, and especially aircraft—all had an important role to play, and contemporary warfare had become unthinkable without them.

Not every article in the *Militär-Wochenblatt*, of course, has stood the test of time. Many were quite specific to their era and place, dealing with questions that were troubling at the time, but will probably never arise in quite the same way again. Because of the tiny size of their force, the Germans had to spend a great deal of time pondering the concept of "war with improvised armies" (*improvisierte Heere*). There are no less than four analyses of this question in the 1931-32 volume: an article on the fighting in Flanders in 1914, when four German reserve corps were rushed to their destruction in front of Ypres; an analysis of American preparation for the fighting in 1917-1918, and two articles on the Russo-Polish war of 1920.²⁰ Likewise, a series of articles discusses "delaying resistance" (*hinhaltende Widerstand*), the German army's obsession in a period when any conceivable war scenario would find her forced onto the defensive almost immediately.²¹

What will one not find in the pages of the interwar *Militär-Wochenblatt*? It may strike some as a surprising list: *Auftragstaktik*, the term used by so many armies today to describe flexibility of command, seems missing in action; so do *Stosstrupp* tactics, a subject of intense scholarly interest in the last ten years; and, of course, *Blitzkrieg*, a term the Germans only adopted after it was introduced by their enemies in the Second World

War, appears nowhere at all. Nothing could be further from the German mentality than making a fetish out of a word or phrase. No rule of war could be universally valid for all times and places. *Kein Schema!* (“Not a formula,” or “Not a hard and fast rule”) was one of the most common admonitions of the German staff, along with a contempt for “*Patentlösungen*” (“patent solutions” or “pat answers”). Seeckt himself warned in an article about the use of “*Schlagworte*”—“catchphrases” or “buzz-words.” They could easily become a substitute for creative thought, he argued. An individual wedded to a buzzword might, after all, become “*einseitig*,” perhaps the worst term of opprobrium in the German military vocabulary. It is interesting to speculate what Seeckt would think of the use of the term *Auftragstaktik* in modern armies. A contemporary German officer would never have used a foreign term with such frequency.²²

This cannot help but give rise to a disturbing thought. If German operational thought of the interwar years was a result of a uniquely German intellectual milieu, perhaps it is not easy for modern armies to copy it. It might be as difficult as ordering someone to “think German” or “be German.” Any educated person would laugh at the notion. This is not to say

that modern armies cannot innovate as well as the Germans, cannot train in ways even more effective than the Germans, or cannot learn from the German experience. It is to say that attempting to bottle a German secret for operational success, or to follow a German script for successful innovation, is probably doomed to failure, and that German usage and concepts must be handled with care.²³ What is required instead is to analyze German concepts carefully in their historical context; translate them, not only into English words, but into American or Canadian practice; and then decide whether or not they are helpful in terms of doctrine. The German military intellect prided itself on synthesizing existing ideas in ways that incorporated them into the fundamental concept of operational level manoeuvre warfare. In other words, the German military intellect built its innovation on top of a structure in which it already had a great deal of confidence. No army can innovate unless it first undertakes a careful study of what is worth preserving.

What, then, is to be done for a modern army interested in innovation? A good place to start is with military history. Commanders who wish to fight manoeuvre warfare on the

operational scale must be thoroughly familiar with its history. The distinctive problems facing the modern army have their roots in the late 19th and early 20th centuries, an age that saw a dramatic growth in the size of armies; increased, apparently insurmountable difficulties in commanding and controlling them; and a vast increase in the lethality and range of weapons. Yet how many officers serving today are conversant in the campaigns of the Russo-Japanese War of 1904-05, the Balkan Wars of 1912-13, or the Spanish Civil War of 1936-1939, let alone the dozens of campaigns of the two world wars? All of them are highly instructive in the problems (and opportunities) of operational-level warfare. All offer concrete examples of the never-ending search for decisive victory. They are the forerunners of contemporary and future campaigns, and their commanders faced many of the same problems that characterize the modern battlefield. Far superior to theoretical discussions of doctrine, they are doctrine taught by example. And, oh yes, there is an article in the *Militär-Wochenblatt* from 1931 stressing this very point.²⁴



ABOUT THE AUTHOR...

Dr. Rob Citino received his Ph.D. from Indiana University in 1984, and is currently Professor of History at Eastern Michigan University. He is the author of four books relevant to the Army symposium: *Evolution of Blitzkrieg Tactics: German Defenses Against Poland* (Greenwood 1987); *Germany and the Union of South Africa in the Nazi Period* (Greenwood, 1991); *Armored Forces: History and Sourcebook* (Greenwood, 1994); and *The Path to Blitzkrieg: Doctrine and Training in the German Army 1920-1939* (Lynne Rienner, 1999). Dr. Citino lives in Ypsilanti, Michigan with his wife and three daughters.

NOTES

1. The interwar period has attracted intense study of late, seen by scholars and military professionals alike as a laboratory of change in doctrine, training, and weaponry, in which some succeeded (the

Germans), others failed (the French), and still others squandered rich opportunities (the British). For an overview, see two essential works: Williamson Murray and Allan R. Millett, eds., *Military Innovation in the Interwar Period* (Cambridge: Cambridge University Press, 1996) and Harold R. Winton and David R. Mets, *The Challenge of Change: Military Institutions and New Realities, 1918-1941* (Lincoln: University of Nebraska Press, 2000). The list of monographs dealing with the era is large and getting larger. See, among others, the works of Robert M. Citino, *The Evolution of Blitzkrieg Tactics: Germany Defends Itself Against Poland, 1918-1933* (Westport, CT: Greenwood Press, 1987) and *The Path to Blitzkrieg: Doctrine and Training in the German Army, 1920-1939* (Boulder: Lynne Rienner Press, 1998); James S. Corum, *The Roots of Blitzkrieg: Hans von Seeckt and German Military Reform* (Lawrence: University Press of Kansas, 1992); Eugenia C. Kiesling, *Arming Against Hitler: France and the Limits of Military Planning* (Lawrence: University Press of Kansas, 1996); David E. Johnson, *Fast Tanks and Heavy Bombers: Innovation in the U.S. Army, 1917-1945* (Ithaca: Cornell University Press, 1998); William O. Odom, *After the Trenches: The Transformation of U.S. Army Doctrine, 1918-1939* (College Station, TX: Texas A&M University Press, 1999); Harold R. Winton, *To Change an Army: General Sir John Burnett-Stuart and British Armored Doctrine, 1927-1938* (Lawrence: University Press of Kansas, 1988).

2. For the constrained scenario in which Germany now found itself, see Robert M. Citino, “The Weimar Roots of German Military Planning,” in B. J. C. McKercher and Roch Legault, eds., *Military Planning and the Origins of the Second World War in Europe* (Westport, CT: Praeger, 2001), pp. 59-87.

3. Major Allen Kimberly, acting U.S. military attaché, to War

Department, Berlin, 23 September 1924, *German Army Maneuvers, September 4th to 19th, 1924, in United States Military Intelligence Reports, Germany, 1919-1941* (Frederick, MD: University Publications of America, 1982), hereafter USMI, reel XVI, frames 210-258. See Citino, *Path to Blitzkrieg*, pp. 120-123.

4. The regular features consisted of "Aus der Werkstatt der Truppe" (From the Soldier's Workshop), a look at various technical questions of weaponry and tactics; "Personal Veränderung" (Transitions); "Heere und Flotten" (Armies and Navies), pithy reports about developments within foreign military establishments; "Aus der militärischen Fachpresse" (From the Military Journals), short abstracts of recent articles from abroad; "Bücherschau" (Book Reviews); "Taktische Aufgabe" (Tactical Exercise); and, finally, "Verschiedenes" (Miscellaneous), supplementary material, often on foreign military developments.

5. All articles taken from *Militär-Wochenblatt*, volume CXVI, no. 26, January 11th, 1932: Lieutenant Colonel Lothar Rendulic, "Die Letzten 200 Meter," pp. 929-933; Lieutenant General E. von Fleck, "Die Leere des Schlachtfeldes," pp. 933-936; "Schicksalsfragen der Grossenkriegführung 1917-1918," pp. 936-938; the book under discussion in the article is General Max Von Gallwitz, *Erleben im Westen, 1916-1918* (Berlin: E. S. Mittler and Son, 1931); "Die deutsche Abrüstung," pp. 939-940; Lieutenant General Marx, "Nochmals: 'Galoppfahren und Reitdienst der Artillerie'," pp. 940-942.

6. All from *Militär-Wochenblatt* CXVI (1931-1932): "Vorbereitungen zu einer neuen polnischen Felddienstordnung," 1, July 4th, 1931, pp. 13-14; "Neue taktische Strömungen im polnischen Heere," 12, September 25th, 1931, pp. 451-452; "Neues aus dem polnischen Heere," 24, December 25th, 1931, pp. 870-871; "Panzerzüge in der polnischen Armee," 45, June 4th, 1932, pp. 1581-1584.

7. All from *Militär-Wochenblatt* CXVI (1931-1932): "Neue französische Vorschriften," 3, July 18th, 1931, pp. 81-85; "Die Ausbildungsvorschrift für Kampfwagen," 4, July 25th, 1931, pp. 124-128; "Die Felddienstordnung (für alle Waffen)," 5, August 4th, 1931, pp. 164-169; "Die neue französische Ausbildungsvorschrift für die Kavallerie," 9, September 4th, 1931, pp. 334-337; "Die Neubildung des französischen Ministeriums für nationale Verteidigung," 38, April 11th, 1932, pp. 1343-1345; "Verstärkte militärische Ausbildung der französischen Jugend," 45, June 4th, 1932, pp. 1584-1586.

8. From *Militär-Wochenblatt* CXVI (1931-1932): Dr. Adam, "Gesundheitszustand des tschechoslowakischen Heeres," 31, February 18th, 1932, pp. 1109-1110; "Gegenwartsfragen in der tschechoslowakischen Armee," 40, April 25th, 1932, pp. 1406-1408.

9. "Verwerfung einer entwickelten Division nach der Flanke," *Militär-Wochenblatt* CXVI, 10, September 11th, 1931, pp. 366-370.

10. "Kavallerie auf dem Streifzuge: Der Ritt der russischen Zusammengesetzten Kavallerie-Division im August 1914 auf Kamionka-Strumilova," *Militär-Wochenblatt* CXVI, 11, September 18th, 1931, pp. 413-417.

11. From *Militär-Wochenblatt* CXVI: Lieutenant Colonel Kuckein, "Eine Fliegermeldung aus der Schlacht von Tannenberg," 14, October 11th,

1931, pp. 518-519; Major General Klingbeil, "Die Operative Bedeutung der ostpreussischen Festungen im Weltkriege," 20, November 25th, 1931, pp. 713-719; Major General Klingbeil, "Die Feldbefestigungen im Dienste der Operation," 37 and 38, April 4th-April 11th, 1932, pp. 1297-1302, 1340-1343.

12. From *Militär-Wochenblatt* CXVI, all by General of Infantry von Kuhl: "Die Eroberung der Baltischen Inseln im Oktober 1917," 29, February 4th, 1932, pp. 1032-1035; "Die Schlacht am Ourcq in neuer Beleuchtung," 39, April 18th, 1932, pp. 1369-1372; "Amerika entscheidet den Weltkrieg," 33, March 4th, 1932, pp. 1161-1167.

13. Michael Howard, "World War One: The Crisis in European History, The Role of the Military Historian," *Journal of Military History* LVII, 1 (October 1993), p. 129.

14. From *Militär-Wochenblatt* CXVI: Colonel von Mantey, "Der Kern der Schlieffenschen Lehre," 5, August 4th, 1931, pp. 161-164; Colonel W. Gründel, "Pyrrhus-Siege: Gedanken zur Verlustfrage," 10, September 11th, 1931, pp. 361-366; "Kordonkrieg—entscheidende Operationen," 11, September 18th, 1931, pp. 401-406.

15. Lieutenant Colonel Friedrich von Cochenhausen, "Taktische Aufgaben aus dem Bewegungskrieg mit Lösungen," translated as "Tactical Exercises in Open Situations with Solutions," USMI, reel XII, frames 482-555.

16. *Ibid.*, 483. See also Citino, *Path to Blitzkrieg*, pp. 64-68.

17. "Tactical Exercise #1," Cochenhausen, *Ibid.*, 484-493.

18. "Tactical Exercise #2," *Ibid.*, 493-497.

19. Found in "Tactical Exercise #4," *Ibid.*, 501-510.

20. From *Militär-Wochenblatt* CXVI: Major Dittmar, "Flandern 1914: Ein Beitrag zur Frage der improvisierten Heere," 7, August 18th, pp. 241-245; "Kämpfe improvisierter Truppen: nach amerikanischen Quellen," 31, February 18th, 1932, pp. 1097-1101; "Improvisierte Kavallerie: aus dem polnisch-russischen Reiterkrieg 1920," 13, October 4th, 1931, pp. 474-476; "Der Feldzug der improvisierten Heere Russlands und Polens 1920," 15, October 18th, 1931, pp. 544-545.

21. See, for example, "Hinhaltende Kampfführung," *Militär-Wochenblatt* CXVI, 41, May 4th, 1932, pp. 1433-1437

22. Even the U.S. Army translation, or better yet, domestication, of the term—"mission orders"—raises as many problems as it solves. It implies a particular breed of battle orders, a unique type, to be used only in special circumstances. *Auftragstaktik*, as crucial a concept as it is for historians, might be a problematic usage in a modern army with a perceptibly different culture. For a strongly worded essay on the way in which German terms and concepts can be misused within the contemporary U.S. Army, see Daniel J. Hughes, "Abuses of German Military History," *Military Review* LXV, 12, December 1986, pp. 66-76.

23. For a well-constructed argument to this effect, see Paul Johnston, "Doctrine is Not Enough: The Effect of Doctrine on the Behavior of Armies," *Parameters* XXX, 3, Autumn 2000, p. 30ff.

24. See Colonel Mantey, "Praktische Winke für das Anfassn kriegsgeschichtlicher Studien," *Militär-Wochenblatt* CXVI, 24 December 25th, 1931, pp. 867-870.

On Doctrine – A Brief Comment

by Lieutenant-Colonel (ret'd) Roman Johann Jarymowycz, OMM, CD, Ph.D.

INTRODUCTION

Canadian Army doctrine has evolved under the brooding, accusatory legacy of the great, official historian, C.P. Stacey, who concluded that the Army “had probably not got as much out of our long training as we might have... man for man it was not by tactical superiority that we won the battle of Normandy.” Stacey chastises “officers whose attitude towards training was casual and haphazard rather than urgent and scientific.” General Foulkes, commander of 2nd Canadian Infantry Division is allowed to observe, “when we bumped into battle-experienced German troops we were no match for them.” Stacey’s harsh verdict is sobering: “one suspects that the Germans contrived to get more out of their training than we did. Perhaps their attitude towards such matters was less casual than ours.”¹

Recently, Professor John A. English continued this reflective criticism in his respected work *The Canadian Army and the Normandy Campaign – A Study of Failure in High Command*. One of Canada’s most important military historians, Professor Terry Copp, has called Professor English’s book “the new standard interpretation of the Canadian Army’s experience in the Second World War.”²

I believe Jack English’s censure of generalship in Normandy was incomplete—his criticism of Keller, Foulkes and Crerar, while not wrong, left out two more interesting targets, Field Marshal Montgomery and General Simonds. I hold a decidedly minority point of view regarding these two gentlemen and while I have been perhaps cruel to Montgomery, I think I have been fair to Guy Granville Simonds whom I consider a *Tragic Hero*—at once

brilliant, but not capable of drawing operational success from his ingenious plans.

In his last chapter after examining performance during Operations *Atlantic*, *Spring* and *Totalize*, English wrote:

the infantry nevertheless performed better than Canadian armour. Without question, the tank arm remained the weakest link in the Anglo-Canadian order of battle... the root of the problem concerning armoured employment was as much historical and doctrinal as technological... It seems incredible, in short, that the tank arm with a significantly lower casualty rate often remained behind while forlorn hopes of infantry, torn by enemy and friendly fire alike, plodded ever onward.³

These are strong words and deserve an answer. English has since admitted that he may have been too harsh. But of course the book has been published and it exists only to lead the Royal Military College of Canada innocents astray and to cause armoured officers to toss in their Gagetown cots.

THE ROYAL CANADIAN ARMoured CORPS

The uneasy marriage of the “tank alone” school of the Royal Tank Corps and the “armour is cavalry” school of the cavalry... To this want of intellectual preparedness was added want of operational experience...

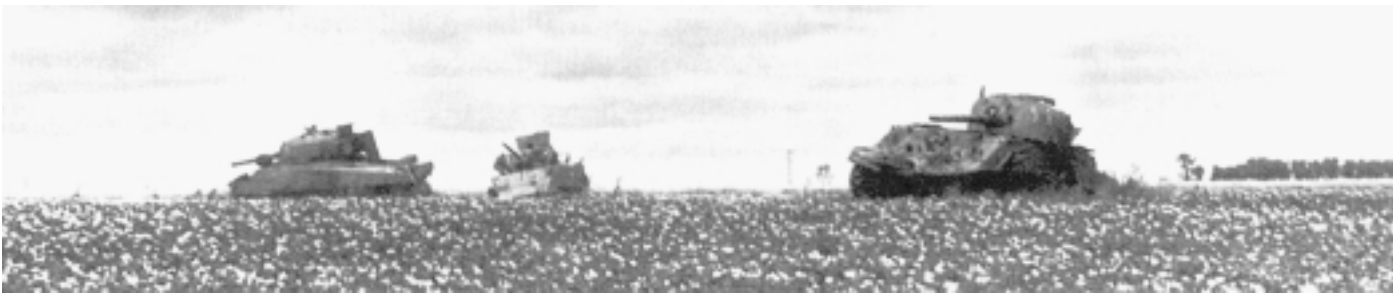
Correlli Barnett,
The Desert Generals

I will attempt to answer this critique of the Royal Canadian Armoured Corps (RCAC), then briefly consider German doctrinal influence on the Canadian

Army, and finally, review the recent Canadian doctrinal dependence on foreign armies. As an initial step in setting the record straight on the performance of Canadian armour in Normandy, it is important to firmly state on behalf of the Corps: “We did not let the infantry down.”

This is not to ignore the fact that the Corps did not perform as dramatically as it should have in two strategic offensives: *Totalize*, 8th August 1944 and *Tractable*, 14th August. The greater part of the problem was command at the brigade, division and corps level. The RCAC evolved quickly as a fighting force, but its leadership was not developed in other theatres. Canadian armour went to battle under the direction of artillery, engineer, and infantry-trained divisional and corps commanders who did not demonstrate an intuitive understanding of this arm. This is unfortunate because across the bocage in 3rd U.S. Army, there were artillery, engineer, and infantry-trained divisional and corps commanders who *did* demonstrate exceptional competence.

It is also important to be at least aware of the domination of North American arms by the artillery—what Brereton Greenhous calls the “unholy alliance [of] artillery generals” and Carlo D’Este dubs a gunner “cabal” in the American Army. Colonel J.A. MacDonald noted that the Chief of the General Staff (CGS), General McNaughton (a gunner), “ignored infantry and cavalry officers in the 1930s. The simple fact that infantry and cavalry officers were bypassed in the selection for staff college meant that they were ineligible and unready for senior commands in 1939.”⁴ The artillery influence in the moulding of overseas North American armies deserves further examination.⁵



Where doctrines meet. The results of interwar doctrinal, technological and intellectual developments were tested in many places, including Normandy. This photo shows three of 11 tanks lost by “B” Squadron, 10th Canadian Armoured Regiment (The Fort Garry Horse) during its attack on Tilly-la-Campagne on 26 July 1944. (Courtesy CFPJ)

THE CANADIAN ARMoured CORPS

Unlike its southern neighbour, the Canadian Army entered the tank business without a power struggle or the castration of a traditional arm.⁶ Deplorably, there was no pause for a doctrinal shakeout as conducted by the U.S. Army in Louisiana and Carolina.⁷ Canadian tactics would be imposed by the British Army. In its zeal to mechanize, the Corps abandoned its real (Cavalry) traditions and attempted to redefine itself around the suddenly very fashionable Royal Tank Regiment (“The Rude Mechanicals”). This ersatz tradition continues to create cultural, perhaps doctrinal, difficulties to the present.

The Canadian Armoured Corps was created in 1941—by 1943, it comprised four major formations: the 1st and 2nd Armoured Brigades designed to work directly with the infantry, and the 4th and 5th Armoured Divisions designed for the breakout and pursuit—the role designated by doctrine writers.⁸ The British Army also used tank brigades equipped with slow, well armoured “Infantry Tanks”: the Matilda, the Valentine, and eventually the Churchill, to support their infantry. In the Canadian Army, the infantry support mission was awarded to the M4 Sherman, the wrong tank, saddled with the wrong role.

There were two basic challenges in the formation of an “Armoured Force”: doctrine and organization. Doctrine called for a clear explanation of how we fight. At the minimum, doctrine meets operational require-

ments. It must be relatively complex if it is to overcome a sophisticated enemy. If totally new, it requires new equipment as well as new command and control techniques. It is then perfected through war gaming. Therefore, an *experimental formation* is vital for any army in order to remain intellectually and tactically alive. Experimentation (the initial British armoured force on the Salisbury Plain or the U.S. Army’s excellent installation at Fort Irwin, for example) allows the doctrine developers to test before they begin to teach. Once the academic staff at War Colleges masters the doctrine, it is time to enter the second phase, education. There are two subsets: revise the curriculum and teach the teachers, who in turn will indoctrinate (and purge anyone who does not profess the faith). Field formations and combat schools then instruct, inculcate and practise the essentials—what Sir Francis Taker called “the approach to battle”, the better the training, the easier the combat (“Train hard, fight easy”—Savarov).

The American Army seemingly has been prepared to learn from the Germans and, with gritted teeth, the Russians. The initial stage, as in any formal debate, requires a definition of terms: *what is a tank?* The armoured division cannot fight as an infantry division nor support an infantry division. It requires a complementary but also distinct doctrine.

Armour particularly demands leaders with skill and imagination—as General R.W. Grow elegantly noted: “Cavalry is not simply an arm—it is a

state of mind.”⁹ Creative experiments with grouping and tactics ensured that when they finally went to war, the Americans were far closer to emulating the success of the German *Kampfgruppen* than the British and Canadians. Part of the reason was a parochial, regimental system. In many ways (language, behaviour, philosophy), the Canadian armoured corps mirrored the American armoured force more than its British brothers. In combat, American armour endured the same teething troubles that Canadian armour did, but it performed better at the divisional and corps level. This can be traced directly to doctrine, leadership and experience. With dangerous impatience, the armoured corps rushed to Europe—leaving the vast training plains of Canada to settle in the tightly fitted countryside of southern England, with its postage stamp training areas.

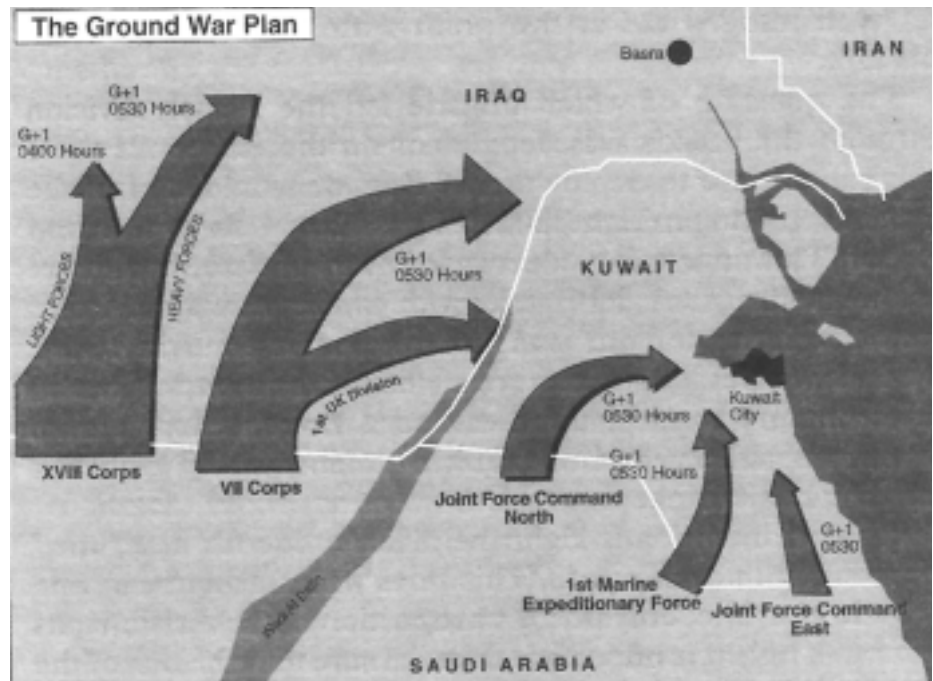
Armoured training was severely limited. While there were dozens of exercises, few permitted extensive tank-infantry training. The *basic armoured course* lasted four weeks: one week driving; a second week for drills (this included a **half-day** for crest, gap, hull down, turret down, and corner drills); a third week for miniature ranges including an **afternoon** to introduce *Supporting Infantry in the Attack*, and one and a half days for *tank vs. tank* action. The fourth week was spent at Lullworth where gunners fired thirty-five 75mm rounds each.¹⁰ This basic course continued from 1943 through to 1944 despite enlightening “Lessons Learned” from the front. All arms training at the battle group level did

not exist; armoured regiments had one to three exercises with infantry companies. By 1944, training was exclusively based on beach assault. Incredibly, there were no brigade or divisional level exercises.

The essence of the *armoured fist*, the 4th Canadian Armoured Division was led by officers who had virtually no armoured experience and were not given the time to acquire it. The experienced officers brought over to command brigades were chosen, one might assume, for their political presence rather than military savvy. Both proved to be embarrassing, if not dangerous. Wyman's performance was lacklustre enough to merit more than the polite criticism he has received. Booth was killed in battle after a series of run-ins with his divisional commander, one of which could easily have led to serious repercussions. The divisional commander himself was fired for incompetence and Simonds' continued good reputation owes much to the bravado and manoeuvre demonstrated by his non-Canadian division—Maczek's 1st Polish Armoured Division. Maczek's own survival and appearance at *Tractable* was only assured because Montgomery and Crerar dissuaded Simonds from taking away the Pole's tanks after a poor showing in *Totalize*.

Canadian armour learned enough basic tactics from British and Canadian mentors to be able to fight—the performance on 7th June, by a battle group of North Novas and the 27th Canadian Armoured Regiment (The Sherbrooke Fusilier Regiment) vs. a panzer *Kampfgruppe* from 25th SS Panzer Grenadier Regiment of the *HitlerJugend* was a splendid illustration of tactical determination. Such an example has been passionately ignored by the RCAC—a force almost snooty in its refusal to study accomplishments in battle of militia units and far more comfortable in Italy—that exciting motherland of open manoeuvre and cavalry dash—where the regular regiments fought.

Canadian doctrinal evolution occurred primarily at the **squadron** level. The Corp's entire operational



A general overview of the ground war plan used in the 1991 Gulf War. (Courtesy Hodder & Stoughton)

armoured experience was centred in Normandy and lasted about three months. Indeed, given success at *Spring*, particularly *Totalize*, Canadian armour would have manoeuvred at the strategic level. It would have been Kitching, not Leclerc or Wood entering Paris.

The German presence in Normandy has been both over-exhausted and misrepresented. Recently, our military lexicon has embraced terms such as *Auftragstaktik* and even *Fingerspitzengefühl* (“an instinctive sixth sense for terrain and tactics—a masterful touch in the art of war”¹¹). In fact, these terms seem to appear more often in North American military history than in German history. *Auftragstaktik*, the *Kampfgruppe* system—the all arms team, was not taught because we sort of used it; rather, we did not have the cultural inclination to practise it the same way the Germans did. I remind you that Field Marshal Erich von Manstein, attempting to explain *Auftragstaktik* wrote:

It has always been the particular forte of German leadership to grant wide scope to the self-dependence of subordinate commanders—to allot them tasks which leave

execution to the discretion of the individual . . . The German method is really rooted in the German character . . . [which] finds a certain pleasure in taking risks.

The dearth of combined arms training before Normandy was quickly demonstrated in combat.¹² After a month of battle, 2nd Canadian Armoured Brigade reported “an armoured corps perception that other arms failed to understand the limitations of armour, [and that] tanks should not be expected to lead attacks against prepared enemy anti-tank positions.”¹³ The infantry often had no idea what the tanks were doing or even if they were actually being supported. The ragged state of tank-infantry cooperation was doubly frustrating, because it became clear that infantry could not advance or defend without tank support:

... the infantry man considers tanks are vital and indispensable to his successful advance.... One tank even though it does not fire at all, will restore impulse to an infantry advance which has broken down under enemy fire. When the tank moves ahead, the infantry will invariably regain heart for the

combat. On the other hand an infantry attack accompanied by tanks, which has been going forward with confidence and efficient action will begin to flag and then fail if the tanks withdraw.¹⁴

This issue was not the utter dependence on armour by infantry,¹⁵ but the need for all arms tactics at the combat team and battle group level. Armour's dual tasks—to be both "Infantry Tanks" as well as "Cavalry Tanks," may account for "the tactical schizophrenia that gripped the armoured corps of the British and Canadian armies."¹⁶

However, the hard facts are that the Canadian armoured corps operated under *adverse conditions* until August. Not only did the open ground favour the German anti-tank defence, but the Canadian tank crews fought at a *technical* disadvantage. The combination of the *Sherman's* thin skin and the German high velocity tank gun proved a dangerous thing. An experienced squadron leader recalled that he saw "a single shot from a Panther knock[ed] out two Shermans before stopping in the wheel sprocket of a third tank."¹⁷ The Germans were openly contemptuous of the Canadians' inability to engage them effectively: "the enemy showed tendency to put his tanks on forward slopes and hold that position counting on the extreme range as a safety factor."¹⁸

The only Canadian tank capable of defeating German tanks at normal ranges was the *Firefly*, but *Firefly* gunnery had its own particular problems and the Germans seemed to single them out for quick execution.¹⁹ Though the *Firefly's* 17-pdr gun was a leveller, they were only available at minuscule rates: one per troop. From June through early August, the maximum number of *Fireflies* in the entire 2nd Canadian Armoured

GERMAN PZ vs CANADIAN TANK BNS					
	8 JUNE	19 JULY	21 JULY	25 JULY	8 AUG
TIGER BN	0	0	1	3	0.25
JAGDPANTHER BN	0	0	0	1	0
PANTHER BN	1	1	3	3	0.25
MARK IV BN	1	1	3	3	0.5
JPZ/STUG BN	1	1	3	4	0.25
GERMAN PZ BNS	3	3	10	14	1.25
CDN TANK BNS	3	3	3	6	14

Brigade **never** exceeded 23 tanks. It is interesting to note that during *Atlantic* and *Spring* six panzer divisions (including 1st *LAH* and 12 *HJ* as well as the excellent 2nd Panzer) and all three Tiger battalions available in western Europe faced Simonds.²⁰ The only *Jagdpanzer* unit on the western front, the 654 *Schwer Jagdpanzer Abt*, was first deployed against 2nd Canadian Corps, appearing at May-sur-Orne.²¹

Finally, perhaps most importantly, 2nd Canadian Armoured Brigade and the 4th Canadian Armoured Division were green, learning their craft in an unforgiving environment. C.P. Stacey said it best: "*There is no classroom like a bullet.*" When 2nd Canadian Corps did acquire operational manoeuvre at Falaise, the achievement was overshadowed by overemphasis on other (American) triumphs, notably on the Normandy front.

PANZER BATTLES

There were nine actions between German and Canadian armoured units in Normandy at or above the battle group level—this includes Canadian battle groups and brigade assaults on German armour or Canadian armour defending against German assaults by battle group or higher. Five were German victories; I consider *Atlantic* an armoured draw. Of the three Canadian victories, at least one resulted in tactical success while the operational plan was defeated. The potentially decisive breakthroughs in *Totalize* and *Tractable* were frustrated by rapid and aggressive German reaction. Nevertheless, determined and equally aggressive manoeuvre by Maczek's and Kitching's armour finally trapped the bulk of two German armies in the Falaise operation.

It must be admitted that in the meeting engagement or manoeuvre warfare (*Spring*, *Totalize*) the Germans

Armoured Battles Normandy				
DATE	BATTLE	CDN UNITS	GERMAN UNITS	RESULT
7 Jun	<i>Buron</i>	23 CAR	2nd, Bn, 12 SS Pz Div	German victory
11 Jun	<i>Le Mesnil Parey</i>	6 CAR	2nd Bn, 12 SS Pz Div	German victory
4 Jul	<i>Carpiquet</i>	10 CAR/ 23 CAR	Kg, 12 SS Pz Div	German victory
20 Jul	<i>Atlantic</i>	23 CAR	Kgs, 1st SS / 2nd SS Pz Korps	Draw
25 JI	<i>Spring</i>	2 CAB	Kgs 1st SS / 2nd SS Pz Korps	German victory
8 Aug	<i>Totalize</i>	2 CAB / 4 CAB	12 SS / 101 SS spz abt	partial Cdn victory
9 Aug	<i>Hill 195</i>	28 CAR	Kg, 12 SS / 101 SS spz abt	German victory
14 Aug	<i>Tractable</i>	2 CAB / 4 CAB	12 SS / 101 SS spz abt	Cdn victory

were superior, but here it must be recognized the superiority was at the technical (Tiger vs Sherman) and operational level (Meyer and Dietrich vs Kitching and Simonds). German armoured plate defeated most Canadian tank guns while their brigade, division and corps commanders were faster to react. If there is anything to learn from the Germans—I suppose it is that we must create senior officers who understand armour as well as manoeuvre and encourage senior leaders to practise control of the battle well forward.

By August, the pendulum had swung dramatically. Crerar enjoyed a most formidable numerical advantage. The criticism levelled at the First Canadian Army and at Montgomery by Americans is that we did not effectively use what we had.²²

Professor English's reference to casualty states might have considered a wider panorama which would have included an item Professors Terry Copp and Bill McAndrew have extensively studied: "Battle Exhaustion."²³ Psychiatric damage caused by continual exposure, inferior protection and survivable hits does not appear in the clipped First Canadian Army casualty statistics. Prominent in the highest casualties rates in Normandy were armoured crew commanders (a majority of these casualties taken while working with infantry). The typical type of casualty received by tank crews was particularly horrid: chaotic explosion, entrapment, and second and third degree burns. Furthermore, tank crews continued to take casualties **after** being brewed up and trying to evacuate.

Trauma from repeated hits, occasions when tanks—through luck or appliqué armour—survived normal killing hits; yet, we ought to consider the continuation to fight. Crews that escaped killed tanks had to overcome shock—then return to battle. Radley Walter's description of knocked-out crews walking back to tank parks and then returning that evening with a replacement Sherman was repeated in every armoured regiment in Normandy.

A dispassionate examination of Armour's performance will reveal, I am prepared to argue zealously, that not only did Canadian armour not skirt *behind* its infantry, leaving it to cope with German arms, but, *whenever* required, attacked with a diligence and determination that could well be described as near *recklessness*.²⁴

The requirements of armour in the offence, from the obscure (*Totalize* at night; *Tractable* in sunlight) to the orthodox, demand a determined advance into the teeth of enemy defences, particularly in the breakout battle; that is what *Totalize* and *Tractable* quickly became. There is at times a smugness regarding the British Columbia Regiment's death on Hill 195. In *sotto voce*, the Corps itself acknowledges embarrassment at the 28th Canadian Armoured Regiment (The British Columbia Regiment) (BCR) "getting lost" and then being lost permanently.

The BCR may have been lost (night approach, first battle) but 2nd Corps also lost the BCRs. *Totalize* was, in its essence, an initial successful operational breakthrough and on the cusp of a strategic triumph. Von Kluge announced: "We have to risk everything. A breakthrough has occurred near Caen the like of which we have never seen."²⁵ The BCR's subsequent appearance near the Liaison (the 28th CAR was grouped with the APC mounted Algonquin Regiment to form an armoured heavy battle group) presented 2nd Corps with a second breakthrough and gave the Germans ugly premonitions of *Ghlibokii Boi*—a real panic resulted in Meyer's *Hauptquartier*. In the end, the BCRs fought beside their infantry until every tank was killed. This, I think, is a legacy for which the Corps need not apologize. Colonel English's comments center, unfortunately, on isolated incidents circa *Atlantic* where, either due to lack of orders (mostly from commander, 2nd Armoured Brigade) or technical impossibility (continuous and effective long range anti-tank fire from guns and armour in hull down positions—

out of 75mm range) there was no Balaclava before infantry battalions. This came soon enough.

The question of doctrinal effectiveness can rarely be solved through historical analysis. Operational experience and the impossibility of having walked in the other man's shoes are a real obstacle. The academic difference between "the way we did things" and the post-bellum wisdom of "how we ought to have done things" is written in blood. In the final reckoning, perhaps the fact that we did not effectively employ armoured doctrine is that we did not produce the *senior armoured commanders* in sufficient time to practise what we preached.

THE GERMAN ARMY'S STRUGGLE TO SURVIVE

Before I leave Normandy, I should briefly examine German influence on our Army. I will begin by suggesting that we learned nothing from the Germans because we had nothing to learn. This is not because we are thick or the Germans incompetent, but because I think doctrine is primarily *cultural*. I have argued we should be spending our time studying *American* military history and understanding its military culture before we go off and adopt *totus porcus*, U.S. Army doctrine.

Once *Blitzkrieg* had its day, and that was in the winter of 1942, the German Army was simply fighting to survive. The Wehrmacht did not foresee the technical and eventual doctrinal ambush that awaited it in the Soviet Union. By the summer of 1943, the Germans were in serious trouble. By the fall of that year, the Soviets were the ones who were doing all the operational and strategical teaching.

German performance in Normandy is mostly a reaction to Allied air power and to artillery bombardment. There is much written on the alleged tactical superiority of the German Army. (I do not for a moment dismiss German command and control, and expertise at organization, particularly in the face of *Ultra*); a study of the German

performance will discover the Wehrmacht put in *more* than its share of, if not stupid, then certainly inept attacks.²⁶

The myth of armoured superiority continues to grace German war histories. The truth is that the KV 1 and T-34 were such a shock to the *Panzerwaffe* that Panthers and Tigers were rushed in a desperate attempt to catch up to Soviet engineering. It is a moot point if technically the Tiger or Panther were individually a superior machine to Kirovs or T-34s. The Soviet Army was not jousting—it played the game at the *operation* level.

In fact, the most successful tank killer of the Second World War was German engineering. The greatest wastage figures were not attributed to close air support or antitank fire, but crew *destruction* and *abandonment* of mechanically disabled tanks. Between 6th June and 7th August 1944, (a relatively sane period with time for regular maintenance) 27% of German tank casualties were due to mechanical failure; by 31 August (a period during which manoeuvre and redeployment was required due to relentless Allied pressure) the figure rose to an astounding 82% (34% abandoned; 48% destroyed by crew)! American surveys for German tank losses between 1944 to 1945 from “non enemy action” put the total figure at 43.8%.²⁷ In comparison, British and Canadian armoured formations (4th Canadian Armoured Division, 1st Polish Armoured Division, 7th British Armoured Division, 11th British Armoured Division, The Guards Armoured Division, and 8th British Armoured Brigade) during the Normandy pursuit (average: 9.3 days; 317 miles) reported 22% tank casualties due to “mechanical failures”.²⁸

At a time when the T-34 was being run hundreds of kilometres per week and maintained by illiterate youths and *kulaks*, the Tiger and Panther required a coterie of Porsche-trained mechanics. The best way to kill a Tiger was to make it move.

Our own response to mechanization was the very respectable Ram, a medium tank that likely

influenced the Sherman. I mention this only because the Americans take great pains to deny it. The Ram evolved far too slowly and was soon swept aside by more “modern” Allied armour. This was partly because it was not tested in battle and allowed to evolve leisurely in Canada by engineers reading battle reports—not as effective as German engineers having battle scarred Generals from the Eastern front raging in their ears.

SURVIVING FOREIGN DOCTRINAL INFLUENCE

Doctrine is not created by elves in back rooms after the cobbler has gone to bed.

David A. Keough,
Chief Archivist, MHI

I have argued elsewhere that the real doctrinal question must be: to what extent is doctrine a reflection of national culture? Clearly one of the most entertaining post-war intellectual struggles is the American and Canadian sycophantic worship of Germanic principles. These produce the awkward conditions. While it is clear Germans *instinctively* understand *Auftragstaktik* because of common training, the impact of a common culture cannot be dismissed. Further, the rule of iron discipline cannot be dismissed either. Being prepared to shoot the less than enthusiastic goes a long way in sorting out C2 problems. I understand our Russian friends in Kosovo have little difficulty today in establishing tight control when a direct flight to Chechnya awaits defaulters parade. I suspect our Army is not ready to impose ruthless discipline—it may want to, but our social and political culture will not allow it. It is difficult to be Prussian in a kinder, gentler army.

Our doctrinal education has been dominated by great empires; here I include the French, particularly the British and most recently, the American. The question thus arises: if doctrine reflects a cultural approach to warfighting, to what extent can one nation adopt another nation’s doctrine? There can only be limited success—doubly true in Canada, which

has a complex empire tradition, and a tendency to ignore its own hard won lessons in war. This is probably more of political than military necessity—in the post war rush to create an all-Canadian, non-British *new model army*; a lot of tactical babies were thrown out with doctrinal bath water. While I have said we are culturally not capable of taking on a Germanic approach to war, we are however, culturally disposed to adopting American doctrinal methods. Here I suggest *caveat emptor* because we remain an Army that is largely ignorant of both American doctrinal evolution (and by that I don’t simply mean the last twenty five years) and its unique military culture.

Without a clear enemy, (admittedly, the Soviets were very handy to have around), no peacetime army is likely to develop the doctrine, let alone the equipment required to conduct it successfully into the next generation. Even when it does, the process creeps along—manoeuvre warfare and its Germanic antecedents took well over a decade to arrive at Kingston. In my fifteen years of reasonably close observation, I concluded that their inclusion in the curriculum was affected from *within* the college rather than from above.

Our next doctrine might be distinctly Canadian. Perhaps we ought to more effectively showcase our outstanding peacekeeping doctrine (which is strangely not the keystone of regular Army and Militia command and staff courses) and concentrate on extending liberal democracy to desperate UN states. It is certainly in our blood and the traditions of New France—*nouveau* Jesuits, moulded by iron discipline, scrupulously educated and evangelically dedicated to bring salvation to tormented nations. Sadly, our present status in the new Roman Empire limits us to the role of peltasts or Balearic slingers—auxiliaries to the fighting legion. Rome is now Leavenworth or Carlisle—and one must speak Latin to learn the *modus operandi* of the new Marian reforms. Yet we are not Romans—although we understand them better than they understand us.

CONVERTING TO DOCTRINE

The real story on doctrine in the Gulf War was not tactical doctrine, but joint doctrine

Colonel Michael R. Matheny

I now understand there are different strata of awareness in doctrinal studies—levels of Nirvana, if you will. At the initial stage one absorbs bon mots such as dash, élan, seriously studies the great captains and then attempts to do likewise. This is normally first attempted at the troop and squadron level with varying degrees of failure—all under the savage critique of peers, NCOs and experienced junior staff officers who logically sneer at neophytes “playing Rommel.” By the time the officer reaches the second strata, he is playing at division or corps headquarters and trying to sort out the operational planning process (OPP) and manoeuvre at a demanding level. Here he meets veterans from bona fide senior staff-wise, scarred men who say in jest: “Put away your silly notions. Division and especially corps planning is serious, heavy stuff; there are important procedures to follow or face disaster—so respect your logistic team and stick to the plan recommended by your G3 and his valiant team.”

It is at this point that one recognizes the third level of Nirvana—here more senior officers return to Patton or Rommel and now appreciate that military brilliance must also include the ability to rise above a conservative staff and defy the odds brokers. Patton’s genius is not that he took a chance while dabbling with tactics as a **novice**. As a battle wise veteran and, as an experienced divisional and corps commander, he had his army do his bidding in the face of disapproving staff. Ditto with Rommel. In *Desert Storm* General Norman H. Schwarzkopf, for all the reputation of being an intimidator, backed down before staff arguments and left General Frederick Franks alone to *do his thing*, which was mostly right-dressing VII Corps. The U.S. Army, despite lip service to Soviets and Germans, hammered out doctrine as a solution, not as imitation: “you

aren’t trying to produce exact duplicates but to pick and choose notions as it is useful to get where you want to go in what is inevitably a new ensemble.”²⁹

A complete overview of AirLand Doctrine and Manoeuvre Warfare evolution will include the influence of General Bill DePuy. He is considered by some “the modern Leslie McNair”—whose thought might make American armoured officers wince. DePuy became fixated by the Israeli experience in the Lebanon, closely studied German C2 techniques, introducing a concept called *synchronization* into the Army doctrinal mix. Synchronization was a *top-down* effort to have all combat power “synchronized” on a common time line.

As a planning device it was extraordinarily powerful in insuring all systems were considered and brought into the mix in the most effective way. As an execution device it was terrible. You can’t fight off of a synchronization matrix because the enemy doesn’t have one—and there is no block for opportunism. But, you can



In many ways, the results were like Operations “Totalize” and “Tractable”.

grade a unit at the National Training Center off one and therein lies the story. The Army fought the Gulf War more or less off of a synchronization matrix.³⁰

MANOEUVRE WARFARE CONSIDERED

I had hoped that after *Desert Storm* Operational Studies became available to arrive at a greater insight into manoeuvre. I was somewhat disappointed but concluded it was my inexperience with corps operations and the mechanics of movement. However, I was curious at the distinct lack of operational manoeuvre—even by divisions. VII Corps advanced in the best tradition of heavy cavalry at Ramilles, Wagram or Waterloo—at a controlled canter, boot to boot, yet unlike even Enlightenment horse, pausing to straighten the line. This remarkably calm progress has been questioned, indeed criticized by no less a figure than the commanding general himself.³¹

Further investigation discovered, particularly on the part of *Armor-Cavalry*, a very clear choice of sides. The overwhelming verdict absolved General Fred Franks Jr. (“a short, introspective



Doctrine as a solution and not imitation. Lieutenant-General Franks, commanding VII U.S. Corps, outlines his intent for the first phase of the land campaign.

commander and a considerate gentleman of the first water.”) and condemned General Norman H. Schwarzkopf³² (“a bully, a big man who equates size and volume with quality of thought and wants unquestioning acceptance, if not cheers, from subordinates”).

The resulting difficulties were compounded by the fact that Franks was separated from daily dealings with Schwarzkopf by Franks’ superior (and Schwarzkopf’s immediate subordinate) Lieutenant General John Yeosock, commander of the Third Army, who (an often overlooked fact) was an intervening echelon of command³³ between Central Command and VII and XVIII Corps.

Whereas General Luck in XVIII Corps spoke to Schwarzkopf regularly, Franks dealt with the great man through Yeosock who, in turn, tried to spare Franks [from] of Schwarzkopf’s histrionics when they came. The gap widened until neither had a grasp of the other’s concerns or perceptions and, in light of the personality difference, neither was willing to extend himself to bridge the distance.³⁴

General Schwarzkopf saw the Iraqi Army fleeing north and he believed he was ready to pursue. Franks decided the enemy would fight, not run, and continued deployment and a *passage*

of lines involving one British and three U.S. heavy divisions and an armoured cavalry regiment “with a single-minded determination to be overwhelmingly stronger at the decisive point.” VII Corps required more terrain, either by Yeosock giving Franks the corridor along the river ultimately used by XVIII Corps’ 24th Division, or by leaving a division or two in an *ad hoc* second echelon for which there was no planning foundation.

He [Franks] was unlikely to get the corridor, given the American democratic desire to give everyone something, and it is not clear a change of plan of the magnitude necessary to gain the open space internally within VII Corps would have been very rapid had Franks considered it desirable or Schwarzkopf ordered it—which, notably, neither did... The [subsequent] Iraqi “escape” everyone complains about was a *release* [emphasis added].³⁵

In some cases, *Desert Storm* was much like our own operations *Totalize* or *Tractable* featuring armoured formations squeezed into tight frontages. The interesting difference is that this was the desert. However, the *Gulf* was more than a *traffic control* problem because the flat, featureless terrain was difficult to navigate on and the

U.S. Army was just learning satellite systems. “The real problem was that M1 could kill at ranges about double those wherein they could safely discriminate friend from foe”³⁶

One of the things that made this conflict a little unusual was the absolute dominance of the M1 tank... Previously, infantry accompanied armour to keep it out of trouble in restricted terrain. The absence of urban or restricted terrain meant the tank led the way in virtually every confrontation. ... we only suffered three M1 losses—two of which were fratricide. It was a dominant weapons system.³⁷

We have since learned that Franks did the *right* thing vis-à-vis staff procedures and OPP. Hindsight wisdom is a delicious thing in military history—post-factum we also discover that Franks’ appreciation of the situation was wrong while Schwarzkopf’s was right. This raises a minor but interesting question in doctrinal studies: what if both commanders claim to have *Fingerspitzengefühl* but only one is right? *Befehlstaktik* (*command*, rather than *mission directed operations*) triumphs.

General Franks scrupulously followed FRAGPLAN 7, visited his field commanders and prepared to fight the enemy he thought was coming. He tidied up his Corps in the best Montgomery tradition of “ducks-in-a-row offensive”—he stated later: “I wanted to be up front so that I could talk face to face with my commanders, feel the tempo... What I lost in comms, I gained in ‘fingerspitzengefühl’.”³⁸ General Schwarzkopf, who had at least an ephemeral flicker of *Fingerspitzengefühl*, was frustrated—nay, livid, because speed and manoeuvre—that new doctrine—was not being applied.³⁹ Schwarzkopf was becalmed by his experienced, prudent staff. In the end, both *Auftragstaktik* (perhaps best suitable for *minor* tactics) and *manoeuvre warfare* (as advocated by Directing Staffs) proved unpractical for the rigours of big league modern war.

SUMMATION

It would be difficult not to pick up echoes of the German and Soviet conceptual corpus in the oral shorthand US commanders used in the Gulf. Some officers then were pretty high church about it, though I think the interest in formal, systematic doctrine has pretty well disappeared now.

Colonel R.M. Swain

Richard M. Swain wrote, “doctrine is written for practical men to satisfy their problems.” I have always liked Colonel Ian McNabb’s definition of doctrine: “It’s how we do things—not a rigid dogma.” I believe doctrine is first and must be a cultural reflection of what an army is *likely* to do in pressing occasions. This college, via its house journal has enthusiastically examined

Manoeuvre Warfare Theory. I have argued that our army should adopt simple terms that mean exactly what they suggest. To me, *Manoeuvre Warfare* is the **alternative** to *Attrition Warfare* and **both** have their place in any staff estimate.

In a subsequent article, a former Chief of Staff of the Canadian Land Force Command and Staff College, an experienced armoured officer, wrote in rebuttal: “*Manoeuvre Warfare has nothing to do with manoeuvre.*”⁴⁰ I think we should consider the philosophical implications of this. Manoeuvre has become not simply an alternative *option*, not merely a suggested *methodology*, but an **ethic**.⁴¹

The U.S. Army may well afford to reconsider epistemology on a grand scale. The last thing the present

Canadian Army needs is an obsessive attempt to metamorphose common sense doctrine into dogma. Smorgasbording philosophy, psychology (“shattering morale”) and skewing simple definitions (“maneuver warfare seeks... shattering...physical cohesion, ability to fight rather than by incremental attrition”⁴²) is gobbledygook of the most precarious kind. It is time our cohorts of newly MA’d and PhD’d colonels noticed the emperor’s clothes and restore common sense into the word cobbling of our doctrine tomes. We must not become an army that prefers sophistry to practical **field** training.



ABOUT THE AUTHOR...

Dr. Jarymowycz was born in Vienna, Austria and survived and has lived in both the United States and Canada. He served in the Army between 1964 and 2001. During his military service, Dr. Jarymowycz held various command and staff appointments including Commanding Officer of The Royal Canadian Hussars (Montreal) and also enjoyed attachments with the British and U.S. Armies on a number of exercises. From 1985, he also had a lengthy association with the Canadian Land Force Command and Staff College, first with the Militia Command and Staff Course in SQFT and later as Dean of the Militia Command and Staff Course from 1994 to 2001. Academically, he has taught at McGill University and has spoken at a number of universities. Dr. Jarymowycz has been widely published both in books and journals. His hobbies include painting; collecting Napoleonic figurines and swords; coaching Rugby and riding horses. He is married and has four budgies, one of which can say Auftragstaktik.⁴³

ENDNOTES

1. Colonel C.P. Stacey, *Official History of the Canadian Army in the Second World War Vol III The Victory Campaign*. Ottawa: DND, 1960) pp. 274 - 277.
2. Terry Copp, *Fields of Fire: The Canadians in Normandy – The 1998 Joanne Goodman Lectures*. Manuscript, WLU 2001, p. 2.
3. John A. English, *The Canadian Army and the Normandy Campaign – A Study of Failure in High Command*. New York: Praeger, 1991, p. 312-313.
4. LCol J.A. MacDonald, unpublished Masters Thesis, “In Search of

Veritable” RMC, 1996. 207. Only two cavalry officers (C. C. Mann and H. W. Foster) were given advanced staff training between 1921 and 1939, both in the year hostilities began.

5. “It is hardly surprising, therefore, that eight of the twenty-two major generals and above who commanded divisions, corps, or the army overseas were fired for incompetence before they saw action; that two more were relieved after their first battle; and another survived only nine months. Nor is it shocking that the record of regular officers who commanded brigades early in the war was, if anything, worse.” MacDonald, 211. When the “Junior Staff Course” was begun in Camberley in October 1942, Canada sent 6-10 majors/LtCols to attend the six-week tutorials. The results were disappointing: “The Canadian officers attending the Senior Officers’ School are not a good selection; that out of 10 students 50% are definitely below what is wanted and that three of them should never have been sent at all. General Montgomery expresses doubt as to whether sufficient care was taken when choosing them.” RG24 9872. Folio 2/SOS/1-2, NAC 15 June 1943.

6. Chaffee was forced to garrote the US Cavalry after his show down with the last Chief of Cavalry, Major General John K. Herr. Worthington had convinced the Minister of National Defence but Rogers was tragically killed in a plane crash. Ralston waited until panzer divisions had chased McNaughton’s Expeditionary force out of France before approving Worthington’s memo for the creation of an armoured force.

7. See: Jean R. Moenk, *A History of Large-Scale Army Maneuvers in the United States, 1935-1964* (Virginia: Headquarters United States Continental Army Command, Fort Monroe, 1969), pp. 2-4.

8. FM100-5, 24 Jan 1941 and the original draft, FM17-10, 21 Jan 1941 “Doctrine and Organization of the Armored Division.” MHI.

9. MGen RW Grow, “Black Lines on a Map”, 5. Grow Papers. MHI.

10. NAC. DHist 171.009 D116. First Canadian Army, Summary of Training Programmes 1943-1944. and, CAC Field Training Syllabus 1944.

11. See: General von Mellenthin, quoted in *Generals Balck and von Mellenthin on Tactics: Implications for NATO Military Doctrine*. BDM Corporation. Virginia. 19 Dec 1980, 22. When Depuy asked Balck how many – out of a hundred – German generals had fingerspitzengefühl, Balck replied “Perhaps three or four – but they were mostly unrecognized.”

12. NAC RG24 3rd Cdn Inf Division, Report G3 3rd CID Jul 44 “The inf comd should NOT try and place tks on the ground any more than he would try to place arty guns. He should state only where he wants the fire

of the tks.”, 2. D Hist 141.4A27013 LD2. 27 Canadian Armd Regt (Sher Fus). After action report, Lt. P. W. Ayriss 31 Jul 44 “Lack of understanding by Inf Comds of the capabilities and methods...” The Infantry’s tactical confusion or desperate initiative, embraced TDs and artillery: “...some Inf fms regard them [SPs] as tks and use them as such when there are no real tks allotted to them...” DHist 141.009. D116 Appx “H” to CMHQ Trg Liaison Letter No. 12 (Hereafter cited as Liaison 12). LtCol Ealsh MC, RA SI Atk, School of Arty, Larkhill. Extracts from a Report on a Recent Visit to Normandy, July 1944. Also, “The inf seemed to get their A tk guns and 17 prs up fast; but then the bn comd didn’t seem to realize that they could release us.... The 17 pr det, once having got their guns in posn did not seem to keep an adequate watch. They were very much afraid of firing their guns.” RG24 14287, 27 CAR after action report, 17 July 44, 17.

13. RG24; 2 CAB Papers and Documents: Report No. 12: “Analysis of 75mm Sherman Tank Casualties 6th June to 10th July 1944.”

14. D Hist CCCR Bulletin: Notes on Battlefield Experience. 19 July 44. “The ‘morale’ value of an AFV, whatever its nature, to the infantryman going fwd to attack.... In one or two extreme cases, even SPs have been used as rallying pts for Inf who would not adv without them.” Appx “H” Liaison 12. DHist 141.009 D116. See also, DHist 171.009 (D160) 19 Aug 44 “Notes on Battlefield Experience Affecting Training.”

15. “Our sp by armour has been very helpful.” G3 3rd CID Jul 44, 2.

16. English, 280.

17. Interview SV Radley Walters; Killaloe, Kingston and France; March/May/Nov 90; May/Oct 91.

18. NAC, D Hist 141.4A27013 LD2. 27 Canadian Armd Regt (Sher Fus). After action report, Lt. P.W. Ayriss 31 Jul 44.

19. Interview SV Radley Walters; and interview Hans Siegel, France and Bad Teinach May /Sept 90.

20. NAC, RG 24 Vol. 13,750. 2nd Canadian Corps Int Sums. Jul 44..

21. BH/MH 19 IX/20; RH 21-5/50.

22. Russell F. Weigley, *Eisenhower’s Lieutenants*. Indiana University Press. Bloomington, 1990; and, Carlo D’Este, *Decision in Normandy*, London: Collins, 1983.

23. Terry Copp, Bill McAndrew *Battle Exhaustion—Soldiers and Psychiatrists in the Canadian Army, 1939-1945*. Montreal: McGill-Queen’s University Press, 1990, pp. 120-127.

24. FGH Sqn at Tilly during *Spring*; BCR, Gds and Foot Gds during *Totalize*, both armoured brigades during *Tractable* are only a few examples.

25. Kriegstagsbuch Panzer Armeeeoberkommando 10.6.44-8.8.44. RH21-5/44. von Kluge to Hauser, evening 8 Aug 44

26. Bretteville, L’Orgueilleuse, Plutot en Bassin, etc. See Terry Copp for an impassioned defence of Canadian tactical performance vis-à-vis German martial arts. The Operational Counter strokes attempted against Dempsey and Bradley were particularly inept.

27. NAC RG24 No.2 Operational Research Section, 21 Army Group. Report No. 17 “Analysis of German Tank Casualties in France 6 June to 31 August 1944.”; see also ORO T 117 Alvin D. Coox and L. Van Loan Naisawald, “Survey of Allied Tank Casualties in World War II” MHI, Carlisle.

28. Mech casualties 2nd Cdn Corps were: 1 Pol Ad 20.8% and 4th Cdn AD 23% respectively. No.2 ORS, 21 Army Group, June 44 – July 45. Report No. 18 “Tank Casualties During the Exploitation Phase.” MHI. See also, Terry Copp, editor, *Montgomery’s Scientists – Operational Research in North West Europe*. Waterloo: WLU, 2000, pp. 22-23.

29. Correspondence with Col R. Swain, former head of the Combat Studies Institute at Fort Leavenworth; author of the US Army’s history: *Lucky War: Third Army in Desert Storm* (CGSC Press, Fort Leavenworth). See also, *The Whirlwind War by Schuster*, a CMH publication, and BGen R.H.

Scales Jr. *Certain Victory – The US Army in the Gulf War*. London: Brassey’s, 1993. B. McKercher and Michael A. Hennessy, eds. *The Operational Art; Developments in the Theories of War*. Westport: Praeger, 1996. and, George F. Hofmann; and Donn A. Starry, eds. *Camp Colt to Desert Storm: The History of U.S. Armored Forces*. University of Kentucky Press, 1999.

30. “I would compare General DePuy to General Leslie McNair. Donn Albert Starry, General USA (Ret) would have been his Chaffee. First of all, AirLand 2000 ... developed in tandem with FM 100-5 (‘82) at TRADOC Headquarters. FM 100-5, from which AirLand Battle came, was written at Fort Leavenworth. Both were overseen principally by General Donn A. Starry. He, rather than Tukhachevsky was the principal authoritative source. ... It is interesting to note that, at the School of Advanced Military Studies where the ‘86 FM 100-5 was written, the Germans were studied more than the Russians, though ... since the mid Seventies and the Foreign Military Studies Office led by Dave Glantz, Jake Kipp and Bruce Menning, did a number of presentations in SAMS that always received a very serious hearing. ... Jack English’s book, *On Infantry* probably had a greater direct influence on AirLand Battle doctrine than any Russian.” Swain, April-May 2001. See also: B. McKercher and M.A. Hennessy, Eds, *The Operational Art*, Westport: Praeger 1996.” Filling the Void: The Operational Art and the US Army” Richard M. Swain. 147-173.

31. General Norman H. Schwarzkopf, *It Doesn’t Take A Hero*. New York: Linda Grey Bantam Books, 1992. 461-464.

32. “General Crosbie “Butch” Saint, US Army Retired, USAREUR Commander during the Gulf War ... was generally thought to be the best tanker of his generation in the US Army—the “maneuver warrior” you are seeking but he never got to demonstrate it outside of exercises and training. That he was in Europe while Stormin’ Norman was in the Gulf was seen by some as a significant misfortune.” Swain

33. “...placed Yeosock in something of an awkward position. Rick Sinnreich has been critical of this additional layer of command. I have often talked to Lieutenant General Yeosock about all this, and I am convinced the land component command is essential. The Army does a lot more than just shepherd the Corps around the battlefield.” Col. Michael R. Matheny, DMSP0/USAWC Carlisle; former Chief of Tactical Plans III Corps. Correspondence, 9 May 2001.

34. Swain, 7 May 01.

35. *Ibid*.

36. *Ibid*.

37. Matheny.

38. General Fred Franks, Jr. (Ret.) and Tom Clancy, *Into the Storm – A Study in Command*. New York: GP Putnam, 1997, pp. 529-530.

39. He was not alone “...we shared Schwarzkopf’s opinion that VIIC just wasn’t practiced or well trained in offensive ops. I have since talked to Gen Franks—about three weeks ago and have changed my mind. He maintains that the reason for the pause was not only to mass combat power but to rest his troops.” Matheny

40. “The Army Doctrine and Training Bulletin”. Vol. 3, No 3, 2000.

41. Swain suggests that evolution continues – the US Army, with the writing of FM 3-0, is preparing to look beyond MW and AirLand Battle. “My own view has always been that maneuver warfare is an ethic not a doctrine, like the Indirect Approach in many ways. It is more about how we talk about what we do than what we actually do.” Correspondence, 26 April 2001.

42. A *Marc Chagall* definition (whose time is past) forged by the army doctrine wordsmiths and rashly made official. See B-GL-300-002/FP-000 *Land Force Tactical Doctrine*, see also B-GL-300-001/FP-000 *Conduct of Land Operations – Operational Level Doctrine for the Canadian Army*.

The Stand-Up Table

Commentary, Opinion and Rebuttal

A Note to Our Readers:

Stand Up Table commentaries normally do not include background about the author, but given the nature of the discussion below, it was felt that providing these details might enhance the credibility of the commentary.

About the Author...

Christopher Ankersen left the Canadian Forces in September 2000 after eight years as an officer in Princess Patricia's Canadian Light Infantry (PPCLI). He served in Croatia in 1992-1993 with 3 PPCLI and in Kosovo in 1999 with 1 PPCLI. He has written on a wide range of defence topics and has won several awards, including one from the British Army for his work on individual and collective rights in the military and one from the Royal United Services Institute for his study of the use of history in decision-making. He completed a B.A. in Military and Strategic Studies from Royal Roads Military College in 1992 and an M.Sc. in International Relations at the London School of Economics in 1998. He works as strategic management consultant in London, England and will return to the LSE in October 2001 to study for a Ph.D.

"TOO MANY HOUSEBOATS": WHY THE CANADIAN ARMY DOESN'T "DO" CHANGE WELL

I cannot say whether things will get better if we change; what I can say is they must change if they are to get better.

Georg Christoph Lichtenberg

Dr. Scot Robertson initiates an interesting discussion in his article "Challenge and Response: Innovation and Change in the Canadian Army."¹ Unfortunately, he is overly optimistic. The Canadian Army is not truly wedded to the notions of change and innovation because of a widespread lack of familiarity with key theoretical concepts, created by a lack of education, a dearth of solid experience and the habit of intellectual embezzlement. As a result, the Army turns to incrementalism as a kind of security blanket, a buffer of half-measures against uncertainty and failure. Faced with crisis, instead of real change—revolution—the Canadian Army opts for the allure of the safe choice—normalcy.

EDUCATION

Education is essential to change, for education creates both new wants and the ability to satisfy them.

Henry Steele Commager

The Canadian Army has not focused on education, preferring training instead. Unfortunately, in choosing instruction over learning, the Army has done itself a disservice. It has ensured that it is poorly equipped to **think**.² What the Army does well is to **execute**, to make things happen, to make a system work the way in which it was designed. The Army's "can do" attitude means it always "gets there," and almost all of its missions are successful. The Army teaches its new recruits this credo and reinforces it throughout their careers. Training—from basic to advanced—stresses drills, lists and procedures. A soldier is trained, rather than educated, to strip and assemble a machine gun or to physically operate the complex systems of the Coyote. Training is vital and cannot be replaced. It became necessary in pre-industrial age armies because of the lack of formal education. In the development of industrial age armies, training became more important because the synchronization of soldiers and units using more sophisticated equipment required it. This training, or instruction-by-rote, works very well at making what is in place work reasonably well. However, it is not very good at imagining a better way of doing something, of changing—

not just rearranging—but fundamentally going back to the drawing board and asking probing questions. This is where education comes in.

Education is an approach to learning. It is a philosophical and pedagogical methodology. It is not about facts and figures, procedures and policies, drills and details. It is about ideas: how to identify them, how to analyze them, how to challenge them and how to come up with them. It is about the kind of critical thinking that will eventually lead to creativity. Education in the Army has not been taken seriously and even recently has come into focus only as an academic pre-requisite, just one more check in a long line of boxes. Now, from early on, and throughout their careers, soldiers must be educated, exposed to ideas—old and new—about their profession. Only through proper education will the Army equip itself with the tools and skills it needs to handle change. Indeed, an educated Army will better understand how change comes about and be better able to analyze and implement those things applicable to current and future requirements. On the tumultuous ocean of change, training is the Army's anchor, while education is both its rudder and its sail.

EXPERIENCE

Added to the Army's lack of education is a lack of solid experience. Increasingly, training is being capped at lower and lower levels—real brigade group exercises where formation and unit commanders and their staffs are put to the test—are becoming things of the past. Furthermore, field training has increasingly become a form of rehearsal. Battle runs are repeats from years past, with commanders and drivers performing their roles and acting on cue. Real experimentation is hard to shoehorn in; for example,

companies and combat teams have a difficult time trying out different approaches or methods. Time (and gas and mileage) available for “shake outs” or episodes of “let’s try this another way” are few and far between. On top of this, with so few chances to get into the field, every “attack” counts. As commanders are evaluated and watched at every turn, there is little room to be daring and fresh. Better to take the hill in the tried and true fashion, at least while the Boss is watching.

In the standard rehearsal exercises, there is little problem solving conducted. Even when problem solving is conducted, it is often constrained by resources or safety issues. Soldiers are faced with a lose-lose proposition: they are unable to try new things because they just do not fit into the exercise script, and, at the same time, they have not been faced with challenging problems often enough to become accustomed with uncertainty. The tendency to revert to the set-piece way “they did it at battle school” is reinforced once again. When characteristics of military operations such as volatility, complexity and ambiguity are removed from the learning environment, it can only have a detrimental effect.

Field exercises are infrequently force-on-force affairs, and even more seldom is any opposing force allowed ‘free play.’ Without a thinking and active enemy, few lessons are learned. When the weapons effect kit is used and thinking enemies are played, the experience gained is amplified at all levels being exercised. These lessons form part of a soldier’s education and are the building blocks for recognizing and handling change. Being told something is fine; discovering for oneself how and if something works is profoundly different. Ask anyone who has been a part of an exchange or worked with another army or gone through the Joint Readiness Training Centre (JRTC) or the National Training Centre. In these experiences, soldiers are exposed to different ways of doing things and it requires them to decide what is good and should be kept and what is bad and should be discarded. Without challenging experiences, exist-

ing ways of working—tactics, techniques and procedures, standard operating procedures and doctrine—are never truly tested, never stretched enough to reveal where the cracks and fault lines are.³

Due to this lack of education and experience, the Army has a narrow field of view. As a result, when the Army is faced with the idea of change, it tends to revert to what is known. Attempts to examine theories (such as manoeuvre warfare) or equipment (such as the LAV III) lean towards comparisons of old theories and equipment. “Manoeuvre Warfare is not very different from business as usual,” the Army thinks, “so we can get away with a few minor modifications.” Or, “The LAV III is really just an Armoured Personnel Carrier, not unlike the M113. It can do all the old things, only better.” Without a thorough familiarity with the fundamental concepts involved, this method of adoption by analogy is understandable. However, it is not innovation, and it means that new ideas and kit are often merely added to existing systems. It is modification, not change.

EMBEZZLEMENT

Almost all absurdity of conduct arises from the imitation of those whom we cannot resemble.

Samuel Johnson

Like a magpie, the Army steals shiny things. And, like a magpie, the Army does not always know what it has stolen. In this case, the loot is not bits of silver paper or bottle caps but rather pieces of doctrine and terms of art. Some say that this is efficient, even economical. We can get the “Manoeuvrist Approach” without going through the intellectual journey. We can get “Combat Functions” without the baggage of analysis. While this habit of acquisition does seem to change things, at least on the surface, it is augmentation not innovation. What is most troubling, from the perspective of innovation, is that when ideas are adopted, the larceny by which they were acquired is not preceded by assessment, analysis or debate. The absence of any kind of process by which

the ideas are created means that they remain foreign and need translating. This translation often equals approximation and much of the original intent of the ideas is lost. The concepts of operational command and operation control, for instance, are still not well understood, probably because they do not lend themselves to appropriate comparison with the previous Canadian command relationships.

INNOVATION AS REVOLUTION

People talk fundamentals and superlatives and then make some changes of detail.

Oliver Wendell Holmes, Jr.

Thomas S. Kuhn, in *The Structure of Scientific Revolutions*, describes the process through which theories and ways of working are changed. When a single paradigm is established, the field is said to be in a state of normal science. All practice is based on the established theory and what little debate that does exist is focused on minor points of detail. Inevitably, such a field runs into anomalies (occasions or events that do not accord with the prevailing paradigm). The field is then described as being in a state of crisis. Faced with these challenges, organizations have three choices: they may ignore the anomalies, dismissing them as “one-offs” or freaks; they may socialise them, incorporating them into the dominant paradigm, often as exceptions that prove the rule; or, they may accept the anomalies and begin to question the prevalent paradigm, seeking to replace it with a new one. At this stage, the organization is in a state of revolutionary science with several competing paradigms extant. The more often a body of knowledge is in such a pluralistic phase, the healthier it is: assumptions are questioned, options for ways of working are discussed and debated and critical thinking abounds. Eventually, one paradigm will be decided upon, and a new period of normal science will commence. Kuhn’s work refutes the view that knowledge is cumulatively gathered and that new theories evolve from old ones. New theories must be born from revolution.

Kuhn concludes that the first two options for dealing with anomalies are far more prevalent than the third; true revolutionary thought is rare at an organizational level. “When confronted by an anomaly [a theory’s] defenders... will devise numerous articulations and ad hoc modifications of the theory in order to eliminate any apparent conflict.”⁴ In this way incrementalism is born. Rather than abandoning the existing paradigm, bits and pieces are added or subtracted in order to gloss over inconsistencies.

But incrementalism is not innovation. Tinkering is not real change. Partly owing to the fact mentioned above, where a lack of experience means anomalies are often not encountered, real revolutionary thinking is rare in the Canadian Army as it is in most militaries around the world.⁵ However, even a cursory examination of a doctrine of half measures reveals its futility. Trying to modify one paradigm, so as to retain it, can introduce severe logical inconsistencies. Often the vocabulary is changed, while the philosophical underpinnings remain. Unfortunately, innovation requires an organization to “walk the walk” as well as “talk the talk”. Often it is the system itself that needs replacing, not any one of its parts, and systems cannot be replaced incrementally. There is no halfway to Manoeuvre Warfare, for example. This is because the premises that are the foundations of the two paradigms—attrition and manoeuvre—are incommensurable.

“Best of both worlds” thinking has led to the creation of several “houseboat” theories in the Canadian Army: houseboats aren’t great houses, and they aren’t great boats either.⁶ Innovation means intellectual risk taking and living with uncertainty. Ignoring anomalies, or recognizing them but then trying to gloss over them, is seen as being easier than real change because it avoids the feeling of leaving the comfort of what is here today for the freefall of change. To be successful “...creative [theorists] must occasionally be able to live in a world out of joint” with what Kuhn calls, “the essential tension” implicit in innovation.⁷

ENGENDERING INNOVATION

Broadly speaking, innovation may be brought about by rectifying the shortcomings enumerated above—increasing education and experience and reducing embezzlement. However, there are some instrumental steps that can be taken to nurture a climate that encourages and seeks innovation, rather than one that pays lip-service to it:

- **Be bold.** Provide broad goals and visionary direction. Identify objectives without proscribing possible courses of action or outcomes.
- **Stress education** as a means **and** as an end. Teach soldiers how to think, rather than what to think. Develop challenging reading lists and professional development routines that go beyond the normal and the known.
- **Get comfortable with uncertainty.** Don’t wait for things to ‘settle down’ before starting; acknowledge that they aren’t ever going to be stable and constant. Don’t look to avoid or manage change, seek to grow through it. Introduce more variables and less constants in planning and scenario development. Kill the sacred cows.
- **Foster dissent** through communication, by holding writing contests like the British Army’s Bertrand Stewart Essay contest and institutionalising debate like that found in the United States Marine Corps (USMC) Gazette. These initiatives should be supported by the chain of command and not merely imposed on junior officers as professional development. Encourage NCMs to participate by focusing on innovation, rather than purely academic paper writing. Models, processes, tricks and new ways of doing things should be showcased.

- **Lead change.** Rather than scoffing at this factor on a PER, leaders should look for change and seek to lead from above, while listening to those below. Establish positions of “thought leadership,” where innovators are given credit and responsibility. Honest reviews of lessons learnt should be conducted, looking for anomalies.
- **Lose as well as win.** Develop realistic training that includes challenges so difficult they lead to “failure” not “exercises by numbers” that always end in success. Realistic opposition forces (OPFORs) and weapons-effect simulators are a must. Simulation training must be progressive and tough. This kind of training should test one’s ability to tackle problems, not rehearse solutions. Finally, training should allow for low-level experimentation and repetition, so that soldiers feel comfortable with the basics and, at the same time, are able to broaden their experience.

CHANGING MINDS

Truth does not triumph by convincing its opponents and making them see the light, but rather its opponents eventually die, and a new generation grows up that is familiar with it.

Max Planck

Things are getting better. The creation of Directorate of Army Doctrine, for instance, has helped reduce the cries of “Is there a doctrine in the house?” heard so loudly even five years ago. The Directorate of Land Strategic Concepts and the Army Simulation Centre are increasingly producing a point of view, something almost unheard of in the Canadian Army since the interwar period. *The Army Training and Doctrine Bulletin* and *the Canadian Military Journal* are providing a medium for expression and

intellectual development. These early and important aspects must be followed by an institutionalization of innovation and the creation of an environment that embraces and encourages change. Without this wholesale conversion and commitment to change, Planck's statement above may prove to be true.



The author would like to acknowledge the comments given by Colonel (ret'd) William Doll, USA, of the Joint Warfare Analysis Centre, Washington, D.C.

1. Scot Robertson, "Challenge and Response: Innovation and Change in the Canadian Army," *Army Doctrine and Training Bulletin*, Vol. 3 No. 4/ Vol. 4 No. 1, Winter 2000-Spring 2001, pp. 69-74.
2. In order to measure this, one might take as a proxy the lack of expressed interest in thinking, as manifest by the absence of good entries into the ADTB's Warfighting Essay Competition.
3. The fact that a great deal of innovation occurs during war (and often after defeat) is evidence of this point.

4. Thomas S. Kuhn, *The Structure of Scientific Revolutions, Third Edition*, (Chicago: U of Chicago P, 1996), p. 78.

5. For an examination of incrementalism in the US Armed Forces see the author's, "A Little Bit Joint—Component Command: Seams, not Synergy," *Joint Force Quarterly*, Spring 1998, pp. 116-121.

6. One example of a "houseboat" that springs to mind is the ill-fated Cougar, renamed from tank trainer to fire support vehicle. How good was it in either role? Did changing its name change its capabilities?

7. Kuhn, p. 79.

More on "The CH-146: An Armed Helicopter for the Canadian Army" by Major D. Houde, Vol. 3, No. 4/Vol 4, No. 1, Winter 2000/Spring 2001 and Stand-Up Table commentary by Captain Tom Bradley, Vol. 4, No. 2, Summer 2001.

Lieutenant-Colonel Mike Dabros, the A7 at 1 Wing Headquarters, Kingston, Ontario, writes...

I feel compelled to respond to the comments of Captain Bradley that appeared in *The Stand-Up Table* concerning the use of the CH-146 as an armed helicopter. I am most concerned about the insinuation that there is no doctrinal basis for such an undertaking. The doctrinal roles of aviation continue to endure as reconnaissance, firepower and mobility. These roles are consistent with the Chief of the Land Staff's (CLS) stated priorities for Canadian aviation in the Army of Tomorrow—reconnaissance, firepower and limited mobility tasks. That we have been unable to provide for all of these roles in the past is more a question of policy, will and resources than anything else. Further, there is no stipulation, as suggested by Captain Bradley, that dedicated attack aircraft types can only fill the firepower role of aviation. This notion is nonsense and is at odds with aircraft employment in the majority of the world's armies. If this were true, the OH-58D, armed-Lynx and armed-H-60 (to name but a few) would not exist.

As well, old Canadian doctrine viewed armed or attack aviation as a division level resource, with only an occasional support requirement existing at the level of the brigade. However, in terms of a brigade *group*,

and in consideration of maturing doctrine, this distinction disappears. Certainly, the UK Army Aviation Corps has provided integral aviation direct fire support to brigade-sized formations for years using an armed helicopter. Further, the lethality of the brigade group is increasing, as is the size of the expected brigade area of operations (AO), and technology is the enabler that will make this transition possible. Aviation technologies are front and centre in terms of an ability to provide the required levers. Arming the Griffon is all about leveraging existing and future technologies to provide for the Army's hard doctrinal requirements.

A bit of background is required. The CH-146 is a utility helicopter. It is not a transport helicopter, it is not an attack helicopter and it is not a reconnaissance helicopter. It is none of these things. By NATO definition, it is a utility helicopter pure and simple, and it does not meet the defining criteria of **any** of these other types (including that of transport helicopter—in fact, it falls far short of the lift requirements of even a "light" transport helicopter). By definition, it is a utility helicopter. Likewise, by definition, an armed variant of the CH-146 would fall within the category

of aircraft described in doctrine by the term "armed helicopter." While such an aircraft would have limitations when compared to dedicated purpose-built types, armed helicopters in the services of our allies provide a significant battlefield capability.

There are many people who believe the Griffon was acquired to replace all of the Chinook, Twin Huey and Kiowa fleets. This belief is incorrect. The Statement of Requirement (SOR) for the Canadian Forces Utility Tactical Transport Helicopter (CFUTTH) addressed certain capabilities (including specific lift requirements) that were previously addressed by these other aircraft, but the CFUTTH was never intended as a pure replacement for any of them. There is no doubt that it does not meet some of the stated requirements outside of the ideal conditions upon which the wording of the SOR was based. Its inability to lift the light gun for anything but training and administrative purposes is a combination of this and the fact that the weight of the gun increased by some 15-20% between the writing of the SOR for the CFUTTH and the time the gun itself was fielded. The CH-146 remains a utility helicopter. One clear advantage of the utility helicopter is that it is able to provide for aspects of all of the doctrinal aviation roles (mobility, firepower and reconnaissance) to varying degrees. Leaps in technology—especially in the area of sensor technologies, precision-guided weaponry

and defensive electronic warfare equipment—are drastically expanding the employment potential of the utility helicopter in its broader context as an aerial platform able to provide for the Army’s doctrinal needs. The utility helicopter will likely never offer the high-end capability that is delivered by dedicated aircraft types, but through technology levers it will come awfully close. This is consistent with CLS direction that such an aircraft be capable of participating in all operations of war but not necessarily be capable of conducting all of the associated tasks. The bottom line is that a utility helicopter must provide significant capability in a flexible package. The significance of this capability is increasing with developing Revolution in Military Affairs (RMA) technologies.

The CH-146 (as a utility helicopter) has to date only been called upon to provide for aspects of the Army’s aviation mobility requirement insofar as it is capable of doing so. The reality is that mobility is probably the area of employment where this particular utility helicopter has the least to offer in relative terms. Many have observed in Kosovo that, for most missions, it is limited to lifting only four passengers on a routine basis. Unfortunately, when one talks of leveraging technology to provide for the doctrinal roles of aviation, lift capacity is not something that is easily addressed by anything other than major modification to the aircraft—i.e., I don’t know of any “strap-on” mission kit that increases the lift capacity of an aircraft. So, although improvements to lift capacity are possible in the context of component changes and a mid-life upgrade, they are not likely in the mid-term. For the time being, what you see is what you get; if you insist on carrying 450 pounds of armoured flooring and three hours (+) of fuel, what you get is the ability to provide tactical mobility to four or five soldiers at a time. At the time of its acquisition, the predominant employment being considered for aviation in the Canadian context was mobility type tasks. It is fortuitous that in the intervening years, the

Army’s appreciation of the future security environment has changed, and with it, has changed the types and weighting of aviation capabilities that it sees as necessary. I say that this is fortuitous because this particular utility helicopter is better suited to providing the reconnaissance and armed capabilities identified in the Army of Tomorrow than it is to providing the lift capabilities it has been used for over the last five or six years. Just as the Army’s future is changing, the future of the CH-146 is changing in lockstep. The less the Army wants this aircraft to deliver mobility, and the more the Army wants it to deliver recce and firepower, the more it has to offer in terms of its contribution to the effectiveness of the combined arms team. The fact is, the ability of this aircraft to meet the challenges of the future is better than was its ability to meet the challenges of the past as a utility helicopter cast in a purely transport role.

The electro-optical reconnaissance, surveillance and target acquisition (ERSTA) system being procured for the CH-146 is a good example of how this is so. The cross section of a Griffon is five or six times smaller at 5-6 km than the cross section of the old Kiowa used to be at 1-2 km, the range at which it had to operate to carry out its task. Sensor technologies afford a level of stand-off to airborne platforms that makes the use of a utility helicopter in a reconnaissance role a standard practice in many countries. The OH-58D is, in essence, a utility/ multi-purpose platform enhanced with electro-optical (EO) recce capabilities and a basic armed capability. It too would make a poor transport helicopter. Without its EO sensors, it would not be survivable in the recce role, just as our old Kiowas were not. And ERSTA will field a capability that is two generations removed from what is flying on the Kiowa Warrior. Just as the Griffon, properly equipped and leveraged in technology, is better suited to reconnaissance on the modern battlefield than it is to transport roles, so will it be demonstrated that its use

as an armed platform offers much more to the overall effectiveness of the force than its continued use in limited transport roles. It simply lacks the lift capacity to make much of a living as a dedicated lift platform.

Do not be fooled by the way we have employed this aircraft to date in places like Kosovo and Bosnia. Get rid of the 1200 pounds of soldiers and their gear, and remove the 450 pounds of floor armour. Clearly, the Army would be far more combat capable utilizing that 1600-2000 pounds of aerial weight potential to provide recce and firepower capabilities (*à la* Kiowa Warrior in the light attack/recce role) than it would be flying around tactically questionable sections (-) of four men. Would you rather have the ability to provide tactical mobility to four or five soldiers or a logistical equivalent? Or, would you prefer the ability to task a sensor that can detect targets at 28 km, recognize them at 16 km, identify them at 9 km and engage them at 8+ km? It all depends on the capability that you elect to build into the available payload of the basic utility airframe. Sure there are limits (a utility platform will never offer the high-end capability of an Apache or Comanche), but tactics, techniques and procedures (TTP) respect those limits. Furthermore, those same limits can be further mitigated by incremental improvements such as implementing an engineering solution to the current torque sensitivity problems (that makes crews reluctant to operate at the all-up-weight of the aircraft), better integration of ERSTA functions into the forward cockpit, and eliminating the flight engineer from non-transport missions. Isn’t it great that the Army has decided in the last few years to place a higher premium on aviation recce and armed roles than on transport roles, because this utility helicopter is far better postured to provide for the former roles. That is not to say that it retains no lift potential; clearly it does (as per its contemporary employment). In fact, lift potential will surely improve with any incremental improvements to the aircraft, and the enduring multi-

purpose nature of the aircraft will ensure that this capability will always be available to the Army commander. Nevertheless, because enhancement of aviation mobility generally requires a corresponding reduction of recce and armed capabilities, I would suggest that mobility tasks will remain a lesser priority for aviation in terms of its day-to-day tasking.

As for Captain Bradley's question of why we should undertake such a developmental path? If our enduring doctrinal requirements aren't enough justification—which I believe they are—consider the increase in overall force effectiveness that aviation brings to the table. The ability to engage targets at the limits of recognition and identification, using the same platform that will be able to look deeper than any other tactical system, will greatly shorten the sensor-to-

shooter loop and subsequently the commander's decision/action cycle. Mobility, reach, stand-off, precision lethality, protection and overwatch, the ability to re-task while airborne and achieve responsiveness across the entire AO, and the ability to look and engage in depth while moving—all situate aviation as an unmatched force multiplier. If you can get past the dated thinking that equates aviation roles to dedicated aircraft types and into a consideration of marrying RMA technologies to an airborne platform, you will realize a big chunk of your doctrinal capability requirements effectively and at reasonable cost.

Finally, we aren't the first to think of this. Air recce and firepower are hard doctrinal requirements in the armies of all our major allies. Many, including the U.S. Army, provide for aspects of these doctrinal

requirements with what are essentially utility aircraft. Specifically in terms of the CH-146, armed variants are already flying in the service of other countries. Maybe dedicated aircraft types will be the end product of this evolution of aviation capabilities at some point in the future, but until then, the CH-146 is postured to provide credible interim capabilities. Maturing technologies that define the RMA will increase the impact of such capabilities in the timeframe of the Army of Tomorrow.



Commentary on "Civil Disorder and the Canadian Soldier Overseas: What Do We Do? The Palladium Experience," by Major Wayne Eyre, The Army Doctrine and Training Bulletin, Vol. 4, No. 2, Summer 2001.

Lieutenant-Colonel R.K. Chamberlain, Commanding Officer of the 1st Regiment Royal Canadian Horse Artillery, writes...

Major Wayne Eyre has raised a timely issue in his article on civil disorder on Op PALLADIUM. His points, while specifically focussed on the experiences of the 1st Battalion, The Royal Canadian Regiment, are certainly well researched and pertinent for consideration on peace support (PSO) or crisis response operations. Clearly, the level of detail in techniques developed and the corresponding lessons learned should be considered in the future. In my previous post as the Directorate of Army Doctrine (DAD) 7 (Firepower), I was intimately involved in the production of new Army doctrine. I believe a brief explanation of the ongoing doctrine production cycle will show that action is currently underway to address the shortfall that Maj Eyre has pointed out.

It is worth noting that DCDS 2/98 restricted training for riot control and that the old Aid-to-Civil Power manual was rescinded. As a result of recent operational experiences indicating a rise in crowd confrontation situations, Armed Forces Council (AFC) directed that doctrine, equipment and training issues be re-evaluated to improve force protection. The Chief of the Land Staff has the lead on this endeavour, but clearly, there are areas of mutual interest for the Chief of the Maritime Staff and the Chief of the Air Staff concerning naval boarding parties and airfield defence respectively. Consequently, DAD 7 leads a pan-CF group that has been involved in actioning the direction of AFC. Since the issue of dealing with crowds covers the complete spectrum of conflict and continuum of operations, a holistic approach has

been taken to address actual and acceptable requirements for the development of doctrine, the procurement of equipment and the development of the requisite training.

The doctrine is envisaged to address the improvement of force protection for CF troops facing crowd confrontation situations in domestic operations, PSO and warfighting. Correspondingly, an interim draft doctrine was developed for all scenarios, specific crowd confrontation equipment was acquired and training, in conjunction with the OPP, was conducted for the 3rd Battalion, The Royal Canadian Regiment Battle Group currently deployed.

Based on lessons learned so far, Draft 3 of B-GL-322-009/FP-001 Unique Operations - Crowd Confrontation Operations (CCO) is near completion and should be ready for wide review in the fall and subsequent formal approval. This publication will provide the necessary doctrinal framework for further staffing to procure CCO equipment and the development of equipment-specific

drills, guidance on tactical formations and training plans. Directorate of Land Force Readiness staff continue to monitor the use of CCO on operations, Directorate of Land Requirements 5 staff are examining equipment requirements, Directorate of Army Training 3 staff will be monitoring training, and DAD 7 staff

will continue to develop CCO doctrine in conjunction with J7 Doctrine, Lessons Learned and Standardization (DLLS) joint doctrine requirements.

In closing, I thank Maj Eyre for a well-presented case on his experiences that will be of use in the future. I sincerely hope that all personnel with

similarly strong opinions on CCO will take the time to review the CCO doctrine in order that it benefits from the wide range of experience on this subject within the CF.



Observations on the commentaries in the Stand-Up Table by Major Peter Williams and Major Ian Hunt, ADTB Vol. 4, No. 2, Summer 2001.

Sergeant Arthur Majoor of Headquarters, 36 Canadian Brigade Group in London, Ontario writes...

CONTINUING THE DISCUSSION OF AMPHIBIOSITY

In reference to the letters by Major Williams and Major Hunt on the subject of amphibiosity, I think two points should be clarified.

First off, I am in agreement with Major Williams that the Canadian Forces require restructuring. Changes in demographics alone will force restructuring if only to preserve capability in the face of a shrinking recruiting base. Add new technologies adapted to military purposes and an uncertain security environment, and the future direction of the Canadian Forces is very unclear indeed. The problem with the proposed amphibiosity is that it puts the cart before the horse by proposing structural changes to generate a joint service doctrine, rather than the structure evolving out of our existing doctrine. Sadly, we seem to be buying new equipment without reference to existing doctrine, as the *Quarre de Fer* exercises demonstrate.¹

To answer Major Hunt, the Canadian expedition to East Timor, the proposed operation in Zaire and the M.V. Katie fiasco all illustrate there are times when the Canadian Forces will have to go it alone. Imagine what would have happened if the Indonesians had contested our arrival in East Timor with mines,

small surface craft or armed action ashore. We must not fall into the trap of relying on allies who may not be able or willing to lend a hand if the mission does not coincide with their interests.

To sum up then, amphibiosity is a robust power projection capability that is not supported by Government policy, current or projected equipment purchases or CF doctrine. Restructuring

Commentary on "Civil Disorder and the Canadian Soldier Overseas. What do we do? The Palladium Experience" by Major Wayne Eyre, The Army Doctrine and Training Bulletin, Vol. 4, No. 2, Summer 2001.

Captain Robert S. Dunn, of the Directorate Land Requirements and the Cloth the Soldier Desk Officer for Ballistic Protection since July 2000, writes...

Major Eyre's article details the equipment normally worn by soldiers engaged in crowd confrontation and riot control. Endnote eight remarks on the level of control at which this equipment was held. He states:

During Operation "Palladium" Roto 6 the release authority to issue and wear face shields was normally retained at the national command level, unless forecasted threat dictated a downward delegation of authority. In the case of a spontaneous incident, authority would be required before face

the Army to support joint doctrine is an urgent requirement, but attempting to tie this into an expensive restructuring project is doubtful, to say the least. Once again, the challenge is to find an economical means to develop and implement a joint service doctrine for the Canadian Forces.



1. Major R.L. Mader, "Manoeuvrist Operations: Some Thoughts on Whether We Have got it Right," *The Army Doctrine and Training Bulletin*, Vol. 3, No. 4/Vol 4, No. 1, Winter 2000/Spring 2001, pp. 50-53.

shields could be issued from company (or in some cases battle group) stores, raising the distinct possibility that troops would already be deployed lacking proper protection.¹

The current Paulsen "riot control" visor worn with the U.S. Personal Armour System Ground Troops (PASGT) helmet provides reasonable protection against larger, low velocity objects (e.g., rocks) that might be encountered but does not afford fragmentation or ballistic protection. The current visors used for Aid-to-Civil Power training were

procured based on an urgent operational requirement (UOR) for employment in the Former Republic of Yugoslavia and are not fully compatible with the CG 634 soldier's helmet. As a result, soldiers have been issued the U.S. PASG) helmet with the Paulsen visor specifically for riot control operations. These visors are not robust for general-purpose land force operations because they scratch easily and are susceptible to catastrophic damage from petrol, oils, lubricants, fuels, insect repellents and cleaning agents that are in common use. These visors also have inherent optical deficiencies: when subjected to direct or indirect light, reflection and glare from that light compromises the soldier's concealment. As well, these visors are not suitable for general field operations due to the unacceptable degree of optical distortion, particularly when used with some in-service optical devices.

The conditions and control measures that are described above for riot control visors will not be addressed by the Cloth the Soldier (CTS) Ballistic Protective Visor (BPV). However, the BPV has been designed to be a general-purpose

visor rather than a purpose-built riot control visor. It will be the first in a family of visors that the Army may procure.² The visor will provide protection against primary and secondary ballistic fragments including mortars, artillery and grenades. The aim of this commentary is to provide supplementary information regarding the future of protective equipment and, in particular, the CTS BPV.

The BPV will provide upper facial and ocular protection in the form of a half-face visor. User feedback from extensive field trials identified the essential operational capabilities. They are: optical quality, ballistic protection and compatibility with issued equipment and weapons. The design has undergone numerous studies to optimize ease of operator use, centre of gravity and other human factor issues, which are essential to visor operation.

The Land Force does not possess a singular or an integrated ocular or facial protection system that provides the individual soldier with adequate ocular and facial security. Currently, LF soldiers are issued facial and ocular protective equipment in

very select circumstances. The introduction of the BPV will correct this deficiency by providing both ocular and upper facial protection against fragments, flying debris and other battlefield threats. The BPV will be issued to all soldiers deployed and training to deploy on UN, NATO, national and coalition operations.

In conclusion, after the fielding of the BPV as a general purpose visor, soldiers will have eye and upper facial protection. However, there will still be a requirement for a dedicated riot control visor that will in all likelihood have similar rules of engagement and control measures as stated above.



1. Major Wayne Eyre, "Civil Disorder and the Canadian Soldier Overseas. What do we do? The Palladium Experience," *The Army Doctrine and Training Bulletin*, Vol. 4, No. 2, Summer 2001, p. 30.
2. The Close Combat Non-Lethal System project is responsible to field a riot control visor that will fit properly on the CG 634 helmet.