The Canadian Army Journal

ISSN 1712-9745

7,3 / 7,4 Fall/Winter 2004

Published Quarterly

National Defence Défense National

The Canadian Army Journal
Canada's Professional Journal on Army Issues

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

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Submission Guidelines

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

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A NOTE FROM THE MANAGING EDITOR

Major T.H. Dillenberg, CD

This issue presents several articles that suggest a volte-face to the editorial focus that has been the norm in the *Canadian Army Journal*. Highlighting the myriad of challenges encountered in Afghanistan, Colonel Stogran provides a cogent overview of 3 PPCLI's mission during Operation APOLLO. In a series of thoughtful submissions prepared by members of the 3 RCR Battalion Group in Afghanistan during Operation ATHENA ROTO 0, readers will profit from a range of fundamental lessons recently assimilated from the field. Clearly, these articles portray the "business end" of the Army's current effort abroad, while underscoring the truth that a healthy amount of intellectual horsepower exists at the unit level. Colonel Horn supplies a compelling survey of special operations forces and their evolution in recent conflict. A complimentary treatment of airborne forces and their impact on modern warfare is furnished in a first-rate paper penned by Captain Rickard. Finally, Major Dion targets conventional wisdom by implying a continuing evolution of E-Forces in his sequel to a previously published item. I hope you will take the opportunity to both consider and challenge the arguments set forth in this issue.

The content, ideas and professional debate are foundational to the success of the *Canadian Army Journal*. To this end, the current milieu of Army transformation offers a target-rich environment for the articulation of both criticism and remedy. As Managing Editor, I am concerned with fostering academic freedom and harnessing the intellectual courage within the Army. Authors, regardless of rank, must be encouraged to write without fear of professional or personal consequences for sharing their viewpoint and without undue censure from the chain of command. Remember, this journal exists as a venue for rebuttal! A quote from a letter recently written to me gives cause for reflection. In offering advice and encouragement, Brigadier-General (retired) C. de L. Kirby wrote, "It might befit the *Canadian Army Journal* to stand four-square for the Canadian Army as a hot-blooded, sanguine vocational institution, that can only be ill-led in its ultimate performance and misled in its ethos by coldly professional exemplars. Good journalism and a positive influence to you!"

In closing, I would like to mention that the editorial staff of the *Canadian Army Journal* has expanded to include Major Andrew Godefroy and Captain Steve Nolan, both currently on the staff at Director General Land Capability Development (DGLCD). This journal is indeed fortunate to have these talented officers, who bring a wealth of both military and academic experience. I extend my sincere thanks to all of you who have taken the time and effort to submit articles, comments, and book reviews. To those tentative members of the silent constituency, I solicit your professional courage in submitting your thoughts for publication.

AZIMUTH CHECK

Brigadier-General M.J. Ward

After years of strategic planning, process development and realignment of Army capabilities and resources, we are at last approaching a decisive point in transformation. The best ideas of senior Army commanders, staffs and all ranks, as witnessed in this journal, are now being translated from potential into real energy. At this juncture, a host of initiatives will combine to boost the Army to a new level of capability. Until recently only illustrated in power point imagery, this level will very soon be quantifiable in terms of real combat power and operational readiness. I place the focus of this convergence on three specific initiatives: the Army Individual Training System, the emerging Army Training Management Framework and the current *Force Employment Concept*.

The Individual Training System has been both responsible for and notably successful in keeping our heads above water in terms of soldier and leader development across all developmental periods (DPs). Throughout the past 11 years, since we conducted the last Army Rendezvous Exercise in Wainwright and until 2003 when we held Brigade Training Event 03 (BTE), our record in maintaining a collective training mindset has been haphazard and inadequate. Success in operations has been more the result of superb institutional individual training than the mission preparation training that we have conducted. Individual training has always been and continues to be the foundation of both our professional development and operational capability. Commencing in 2000, the review of all individual training courses in the Army has validated enduring training methods and skills. It has also allowed us to look ahead to incorporate new methods and skills necessary to fight and win in the emerging security environment. We are still in the first cycle of that review. Our objectives have been met in some cases, yet overtaken by events in others. We can do better. The need to continuously review training content, incorporate lessons learned and embrace best practices from our allies with a view to rapidly assimilating required skills and knowledge will be important so that we remain at the cutting edge.

The quality of leadership across the Army is world class. Nevertheless, as with any high performance team, we cannot rest on our laurels; there is more that we can do. Foremost, in terms of orientation, we need to permit much more innovation and creativity in leader development if we are to adequately equip our officers and NCOs for increasing unpredictability and complexity in operations. We do not yet have the authority to manage this evolution for all Army MOCs, nor for purple MOCs. Therefore, we need to work closely with all Canadian Forces training establishments to ensure that we achieve the best possible operational orientation, leadership ability, physical fitness and training progression for all arms right from enrolment onward. The Army has finite resources to achieve its mission. Accordingly, we must minimize undue time spent on individual training and maximize skill levels through subsequent collective training and employment of all arms and services in preparation for operations.

B-GL-300-008/FP-001 *Training Canada's Army* identifies fours pillars of professional development: individual training, collective training, and personal development and experience. The collective training pillar has been deficient. The recently completed Army Training

Management Framework (ATMF), together with the ongoing Collective Training Management Framework (CTMF), will direct collective training and assign resources according to the demands of operations and the Managed Readiness Plan. This will discipline collective training so that the right troops are training for the right tasks and to the correct standard. In addition, this will be accomplished with the necessary support to ensure high readiness in preparation for general defence tasks and operations. Dry and live collective training, coupled with state of the art constructive (JCATS), virtual (Phoenix and LAV III crew gunnery trainers), and live (MILES 2000 weapons effects simulation) simulators plus simunition, will provide our field force units the ability to visualize combat and battlefield effects at a level of fidelity never achieved before in this Army. This will allow us all to evaluate tactical effectiveness through measurement of performance once we commit to tactical operations. We will also be able to explore second and third order effects of combat decisions to improve command and control agility especially aimed at how to manage, overcome and exploit chaos in the complex battlespace. This is relevant to leaders in all arms and services. Moreover, it is a win-win situation. Collective training will occur at home stations, in regional training areas and at the Canadian Manoeuvre Training Centre (CMTC) to permit continuous progression toward deployed operational readiness standards for full spectrum operations. Annual BTEs that focus on sustaining general combat skills incorporating new operating concepts and doctrine will provide the step up from battle group to brigade group manoeuvre operations, which will, in turn, challenge field force leaders at all levels. This will also provide a measurable timetable within which we synchronize the introduction of new tactics, techniques and procedures (TTPs), delivery of advanced capabilities and validation of training of combined arms teams up to brigade group level.

The AMTF and CTMF will also address Reserve Collective Training up to and including CMTC rotations. Reserve forces are already benefiting from simulation and simunition in Area Concentrations like LFCA's August 2004 Exercise STALWART GUARDIAN, in which company level operations in built up areas were conducted using simunition to assess combat outcomes. The learning value of such a tool used in a valid exercise and following rigorous preparatory training, after action reviews and multiple attack scenarios cannot be overstated. During 2004-05, Director of Army Training staff will develop the training model for Reserve collective training so that as CMTC comes on line beginning in 2006, a level of both high and low readiness is achieved. This will evolve into an appropriate Reserve Management Readiness Plan, for which much more work needs to be done.

The *Force Employment Concept* (FEC), published in March 2004, provided the conceptual foundation that describes how the Interim Army will fight. This seminal document will guide doctrine and TTP development, while leading combat and force development from now on. The first milestone in this regard was the production of "experimental" TTPs for the Direct Fire System and draft doctrine in the form of Battlegroup Operations. These will be validated through field trials and collective training commencing Fall 2005 and will dovetail with CMTC's initial operational capability by 2006. The FEC details the relationship between the five operational functions of—command, sense, act, sustain and shield—and how they will enable commanders to achieve decisive tactical success in the context of manoeuvre warfare, mission command and effects based operations. Our ability to achieve the capabilities described in the FEC and to apply them innovatively in the "three-block war" rests on how well we prepare our leaders and soldiers for the challenges and realities of high intensity, land combat. This calls for maintaining cohesive collective fighting spirit, while building individual agility and readiness. The

convergence of individual and collective training capability will provide the means to achieve that endstate.

This editorial is intended to be neither utopian nor minimize the myriad of challenges that we face. The foregoing comments point to hallmark building blocks of an effective, efficient and professional Army training system. Like all capabilities, they will only serve us if we all strive to maximize the results that are achievable from them. As one Army, we have to embrace the opportunities and challenges that additional realism in training will present. We must thrive on learning—including through failure—candidly evaluate our strengths and weaknesses, and maximize the learning potential of every activity. The goal will be achieved when we can confidently declare that our training produces the most innovative, creative, agile and adaptable leaders and soldiers on the battlefield. We have that potential, and increasingly, we have the tools to do the job.

AN OVERVIEW OF THE ARMY INDIVIDUAL TRAINING AND EDUCATION RATIONALIZATION STUDY

Major R. Martin

INTRODUCTION

Between October 2003 and March 2004, the Directorate of Army Training (DAT) and the headquarters and school staffs at the Combat Training Center (CTC) in Gagetown conducted a detailed rationalization study of the Army's Individual Training and Education (IT&E) System. The results of this study were presented to the Acting Chief of the Land Staff (A/CLS), Major-General Caron, and to Army Council on 15 April 2004. Although options for radical reductions to training throughput and course durations were considered in the study, the A/CLS directed that only moderate reductions be implemented and that there be no additional transfers of individual training to field force units without first considering all other implications.

The driving force behind the IT&E Rationalization Study was the requirement to mitigate the increasing personnel tempo in the field force. In the last decade, members of the Army have come under intense personal pressure because of revolving operational deployments, large numbers of individual taskings and increased educational and training requirements. While the Army's ability to reduce operational taskings is limited, there is considerable scope to examine areas under the Chief of the Land Staff (CLS) control with a view to mitigating high levels of personnel tempo. Perhaps the most significant area under CLS control is individual training, both in terms of the courses that are conducted and of the taskings that are generated to support those courses. The following quote by the CLS, Lieutenant-General Hillier, sums up well the requirement for rationalization:

> *I have great concern regarding the demands being placed on our soldiers. We will fail unless we take care of them and their families. Commanders at all levels will actively promote and enforce my principle of soldiers first. I expect the personnel tempo to be managed wisely and every measure taken to mitigate the pressures we place on our soldiers. We will re-examine the training we conduct and how we deliver it as a first step in mitigating the current high tempo of the Army.*[1]

This article provides but a brief overview of the IT&E Rationalization Study. While it may give the impression of a sequential and measured approach, the reality is that the DAT and CTC staffs had many false starts and struggled to develop appropriate concepts and methods to conduct the analysis and present its results. In reality, we were breaking new ground in how we conceptualized and analyzed individual training in the Army. In the paragraphs that follow, we will explore the nature of Army IT&E Rationalization, how the Rationalization Study was done and, finally, the results of the study, including the decisions by the A/CLS.

WHY IT&E RATIONALIZATION?

According to the *Canadian Oxford Dictionary*, to rationalize is to "make (a business etc.) more efficient by reorganizing it to reduce or eliminate waste of labour, time, or materials."[2] Both the Army Systems Approach to Training (ASAT) and the Canadian Forces Individual Training and Education System (CFITES) seek to provide the most appropriate training and education "to the

right people at the right time for the right cost."[3] In other words, effectiveness and efficiency are fundamental tenets of our individual training system. However, the Army IT&E Rationalization Study was the first time that a systemic review of all Army controlled training was undertaken at the same time, with a view to making it more efficient while maintaining the effectiveness of training.

It quickly became apparent that the issue of IT&E Rationalization was a very emotional one. Officers and NCOs in the Canadian Army are very attached to our way of qualifying individuals for employment in units. This is due in large measure to the successes and effectiveness of the Army's training methods. For instance, it is acknowledged by virtually everyone in the Army that our skills and knowledge as individuals are second to none, and this is readily attributed to our individual training system. Moreover, there is wide agreement within the Army that our ability to succeed on operational missions throughout the period of the 1990s and early 2000s, despite tight budgetary restrictions, manpower shortages, and limited collective training opportunities, was largely due to the high quality and demanding nature of our courses.

However, this type of success is achieved at a significant cost. The CLS has recognized the huge impact that the individual training system has in determining personnel tempo in the Army. Simply put, when an individual goes on course, he is no longer available for employment in his unit. When the course is not at the individual's home station, he must leave his family for the duration of the course, thereby compounding the effects of high operational tempo on quality of life. Formal individual training requires a school infrastructure and dedicated instructional staff. Moreover, if there are not enough instructors at schools to run the courses, units must be tasked to provide incremental instructors or training support soldiers to round out the school staffs. Therefore, while the systemic benefits of individual training and education are self-evident, they require resources, most significantly, human resources. Consequently, any improvement in efficiency would likely lead to a significant reduction in personnel tempo in the field force.

To this end, in September 2003, the CLS directed that the Land Force Doctrine and Training System (LFDTS) conduct a fundamental review of how individual training and education is conducted in the Army, with a view to rationalizing our individual training and reducing personnel tempo.[4] In addition, any budgetary savings were to be identified so they could be re-allocated to collective training. The CLS indicated a willingness to accept considerable risk and highlighted the need to be ruthless in considering options for reduction. In order to ensure that radical options would be considered, he ordered a full analysis of the impacts and risks of reducing the Army's individual training needs by up to 50 percent. This led LFDTS and the CTC in Gagetown to conduct a detailed IT&E Rationalization Study that included a 50 percent training reduction analysis.[5]

HOW WAS THE STUDY DONE?[6]

The Army IT&E system consists of two interrelated sub-systems. One sub-system consists of the various training establishments (corps schools, area training centers, etc.) and their physical plant, in other words, the training structure. The other sub-system consists of all those procedures, methods and principles that are used to develop and conduct individual training and education activities in the Army, in other words, the ASAT.

The DAT and CTC staffs initially examined the training structure sub-system to determine if anything could be done from an organizational perspective to reduce taskings and thereby

mitigate personnel tempo. As it happened, there were already two initiatives underway to reduce the number of taskings for incremental instructors and training support staff, both started in 2001: the Army Training System Rebalance (ATSR) and the Individual Training Cadre Backfill (ITCB). The objective of ATSR was to post additional officers and NCOs into Army training establishments in order to reduce augmentation taskings. The aim of ITCB was to provide additional funding to Land Force Areas to hire extra reservists in support of militia training, specifically during the peak summer months. An audit by CTC established that, through a combination of additional personnel, adequate funding and efficient use of schools' personnel, the projected Army tasking needs in support of individual training were already being considerably reduced. In some cases, the requirement for augmentation was completely eliminated. In essence, the decision to "reinvest" in the Army's individual training structure was bearing fruit, but because moving personnel takes time and must proceed in steps, the benefits to personnel tempo were only just beginning to be realized.[7]

The DAT staff also briefly considered other options in reviewing the Army's training structure, but the impact on personnel tempo was not immediately evident. These options could have also led to major modifications to the business planning and tasking processes, but all for somewhat dubious benefit. Consequently, the DAT and CTC staff effort focused on analyzing the ASAT in order to determine the potential for rationalization.

The main determinant of personnel tempo and resource consumption in support of the individual training system is production. "Production" refers to the requirement to qualify individuals for purposes of career progression and unit operational readiness. For the Regular Force, production requirements are a function of recruiting, through the CF Strategic Intake Plan (SIP), and promotions, through the Annual Military Occupational Review (AMOR). These processes contribute to a five-year projection of qualification requirements to ensure the long-term health of Army occupations. For the Primary Reserve, production has historically been driven by high attrition rates, especially at entry level. Lowering attrition in the Primary Reserve is potentially a means of greatly reducing total training demand in the Land Force, but this was viewed as beyond the scope of the study.

For most purposes, such as course planning in schools or course loading, expressing production in terms of numbers of course serials and students per course was sufficient. However, for the Rationalization Study, a mathematical concept was needed to allow for the abstract representation of the various types of training. This is because certain courses have a disproportionate impact on the IT&E System because of the large number of course serials that must be conducted annually. For instance, the Soldier Qualification (SQ), because it is the common qualification for all Army NCMs, has the highest annual production requirement, with close to 2,000 personnel requiring qualification in any given year. Therefore, although the SQ is not a particularly long course (currently 33 days long), the Army must devote a significant proportion of its training resources to it simply because so many people must be qualified. In other words, the SQ is a high "throughput" course.

Throughput is the product of the total yearly production requirement for each course (as determined from recruiting numbers and promotion requirements, by rank and occupation) and its respective duration. It is expressed in "student-days."[8] This allows the comparison of the various types of courses that are offered to different ranks and members of different occupations on a common basis. It also expresses the resource impact of all courses in neutral terms. For example, while a basic course like the SQ represents approximately 28 percent of the Army's throughput in terms of student-days, an advanced course like the Infantry

Qualification Level 6B course represents approximately 1.5 percent of total throughput. This means that a small reduction in production or in duration on the SQ would have a larger impact in terms of resources and personnel tempo than a large reduction in production or in duration on advanced courses.

If one accepts that the basic measure of production is the student-day, then the obvious means of rationalizing individual training is to reduce overall student-day throughput. In principle, this can be achieved in one of two ways. The first would be to maintain all courses at current durations while reducing the number of individuals receiving formal training. The second approach would be to reduce the durations of all courses while maintaining the numbers of individuals receiving the training.

LFDTS examined the concept of reducing production by eliminating up to half the total number of course serials for all national-level training conducted within the Land Force, on the basis of current requirements for Army Professional Development and career progression within occupations. It was assumed that this could generate significant reductions in augmentation tasks as well as resource savings. While this approach was rudimentary and non-discriminating, it initially appeared to be the quickest and most effective means of reducing individual training. Commander LFDTS therefore directed Commander CTC to provide an impact assessment of reducing production on Army national-level courses by 50 percent. The resulting analysis indicated that reducing training by drastically reducing production was not a viable option for rationalization. At the very least, it would contribute to already existing backlogs in qualified junior leaders and could potentially jeopardize unit operational readiness.

Ultimately, such an approach could prove catastrophic to the Army, especially with the increased recruiting of recent years and the forecasted requirement to qualify a "bow-wave" of junior leaders in future years. Moreover, any reductions in personnel tempo would surely be offset by growing dissatisfaction with increasingly limited possibilities for qualification on career courses.

The Director of Army Training presented the results of this initial analysis work to the CLS at Army Council on 3 November 2003, with the recommendation that the Army build on the positive results of ATSR and ITCB. Additionally, he recommended that any further rationalization analysis consist of a fundamental strategic reappraisal of our way of doing business in the IT&E System. The key to truly major reductions in individual training would potentially involve a complete redesign of the way it is conducted. The CLS accepted these proposals and directed that the results of a full Training Reduction Analysis be presented to Army Council in April 2004.

Given that simply reducing individual training production was not possible, it was essential to examine ways of reducing course durations in order to lower throughput. The Director of Army Training therefore determined that the best means of achieving the CLS' aim would be to analyze each course conducted by the Army to identify potential reductions. Each reduction would have to be assessed for systemic impact and risk, and potential mitigating strategies identified in order to address unacceptable risks and maintain the viability of occupations as well as the operational readiness of units.

The DAT staff conducted initial analyses of all Army and combat arms qualifications in order to identify potential reductions by occupation and developmental period. The Director of Army Training then issued guidance to Commander CTC in early January 2004. The CTC HQ and school staffs then conducted detailed training reduction analyses on the basis of this guidance

for each of the courses. Risk and impact assessments were also produced. Training reduction matrixes were produced and validated by the DAT staff and formed the basis of the subsequent report on IT&E Rationalization to Army Council.

Commander LFDTS initially directed that the study focus only on analyzing reductions on the order of 50 percent to each course. However, Commander CTC proposed that more moderate reductions also be analyzed in order to provide the option of scaling the implementation of rationalization and to account for reductions that were already being implemented, and which may have gone unnoticed at the strategic level.

Consequently, two options were retained for detailed analysis and presentation to Army Council. For purposes of clarity, they can be summarized as follows:

♦ **Minor Reductions Option**. Although the examined reductions were anything but minor, as compared to the major reductions they were much more moderate and manageable in nature. This option was based on reducing course durations by an average of 20-25 percent. In essence, it presented and accounted for rationalization initiatives already being implemented, such as changes to the Artillery professional development system, the Armour Corps Reorientation and the reduction of the SQ in September 2003 from its original 57-day duration to the current 33 days.

♦ **Major Reductions Option**. This option was based on an average 50 percent reduction in the duration of all formal courses. In practice, the analysis was conducted with a 5 percent margin in order to provide flexibility in determining reductions.

The DAT and CTC staffs reviewed 38 Regular Force courses based on Armour, Artillery and Infantry Occupational Specifications and the Land Environmental Specifications.[9] The training plan and syllabus for each course was analyzed to the level of enabling objectives (EOs), with a view to identifying course material which could be redesigned, eliminated or transferred to units for experiential learning on the basis of collective training, formal on-job-training or other means of training delivery such as self-paced learning or unit professional development sessions. In addition, each potential change to current training was assessed for systemic impact and risk. This was done for each occupation, for both the minor reductions option and the major reductions option, and then each option was compared to the baseline course duration on a course-by-course basis down to the EO level. The G3 Army Individual Training Design at CTC HQ created a database to allow the compilation, tracking, comparison and presentation of these analyses. Finally, a production model for each option was created as a means of identifying the overall impact on throughput of the proposed reductions in training duration for each occupation and for common Army courses. These production models compared the reduced throughput of each course to the baseline throughput, and also showed the relative throughput attributable to each course within an occupation, for both the baseline configuration and the option in question.

The results of this Training Reduction Analysis were presented to Army Council in the form of an extremely detailed report on 1 April 2004 and followed up with a comprehensive briefing by the Director of Army Training to Army Council on 15 April 2004. This briefing focused on the risks inherent in each option and each potential reduction.

WHAT WERE THE RESULTS OF THE STUDY?

One of the interesting findings of the Rationalization Study, and specifically of the Training Reduction Analysis, was how little monetary savings would accrue from reducing individual training, even if the 50 percent major reduction option were to be fully implemented. In fact,

the analysis indicated that the major portion of financial resources that are expended on individual training cover fixed costs associated with our training structure and physical plant, not variable costs associated with production and throughput. In other words, it is the Army's training infrastructure which is costly not the students.

Even more surprising, however, was the extent to which the Army's IT&E System was already being rationalized. For instance, the redesign of the Artillery's professional development system, initiated in 2002, had led to a fundamental revision of how Artillery NCMs, both Field and Air Defence, are trained and employed. In some cases, the training reductions resulting from these fundamental changes are on the order of 75 percent. Training reductions within the Armour Corps resulting from the decision to focus on armour reconnaissance are also highly significant. In fact, of the 33 courses that were analyzed in detail for both the minor and major reductions options, 22 were already the object of rationalization initiatives, either by reducing the course duration or by changing production requirements.

A further observation is in order with respect to the training impact of new technologies. Thanks to the Rationalization Study,

> There is a clear understanding within the Army leadership that within the near future, individual training is likely to increase, rather than decrease, due to new technologies. The Army has recognized that the introduction of new technologies take more time to teach during individual training courses and create skill retention challenges for the Field Force (sic), which in turn creates a need for more refresher training. As an example, as a direct result of introducing the LAV III, the traditional Infantry Phase IV course, which used to finish in mid-August when the M113 was used, now runs until early September. The FOO course has also increased due to the introduction of the LAV OPV.[10]

In the case of the minor reductions option that was analyzed and presented to Army Council, total student-day throughput would be reduced by approximately 31 percent with respect to the baseline throughput in 2003. This is because of the disproportionate impact of reductions to high-throughput courses such as SQ and NCM occupational training. These reductions would be achieved at relatively little risk, as many of the changes proposed in this option are already being implemented or under consideration. Augmentation requirements, which lead to taskings for incremental instructors and support staff, would be reduced by approximately one quarter over and above the effects of the ATSR.

In the case of the major reductions option, which was based on average reductions to course durations of 50 percent, total student-day throughput would be reduced by 48 percent. However, contrary to the minor reductions option, this option would require major changes in the way individual training is conducted, including the downloading of many requirements to the field force. Risks to personnel and operational readiness would also be significant. Augmentation requirements would potentially be reduced by about half.

The effect of reductions in course durations to augmentation requirements, and therefore the impact on personnel tempo, was essentially linear for both options under study. However, given that the minor reductions option was essentially an accounting of rationalization initiatives already in the works, the risks were considered by Army Council to be more manageable than the risks associated with the radical major reductions option.

A further advantage of the minor reductions option was that it could be implemented relatively quickly. In some cases, the reductions had already been accounted for in the CTC's Business

Plan and were being implemented in 2004-05. On the other hand, the major reductions option would require a great deal of additional staff work before it could be implemented and would result in fundamental changes to the Army's IT&E System. Given the risks inherent in the latter approach, it was not clear that 50 percent reductions would be worth the effort.

The consensus at Army Council on 15 April 2004 was in favour of the minor reductions option. However, many members of Army Council noted the requirement for stability in the IT&E System, as the pace of change has increased over the last few years. The potential downloading of individual training to field force units was also seen as a cause for concern, as was any perceived lowering of standards on common Army courses. Consequently, the A/CLS directed that the minor reductions option be implemented, with the following four observations:

- minor reductions will be implemented, or continue to be implemented, where there is no impact on the field force, particularly with regard to downloading of individual training;

- he acknowledged concerns over potential reductions to the duration or standards of common Army training and directed that there be no changes to Soldier Qualification, Primary Leadership Qualification-Land (PLQ-L) and Common Army Phase (CAP) pending a full impact assessment of reductions to these courses;

- we must understand the full implications on the field force of implementing minor reductions; and

- LFDTS will continue to rationalize IT&E through judicious and timely application of the Army Systems Approach to Training.

Subsequent to this strategic direction from the A/CLS, the Commander LFDTS issued his implementation orders to the formation.[11] The minor reductions option will be implemented by CTC over the course of the next two years, essentially by continuing with initiatives already under way. Commander CTC, as the Army Individual Training Authority, has issued an implementation plan that provides detailed information on the exact changes that will be occurring for each of the courses as well as the implementation schedule.[12] It is important to note, however, that none of these changes will result in transfers of training to field force units. In addition, all of the changes are a continuation of current trends and should therefore be fairly well known within each corps.

Furthermore, in order to minimize needless turmoil and provide some sense of stability, Commander LFDTS imposed a moratorium on changes to SQ, PLQ-L, CAP, and the Army Operations Course until 1 April 2005. This will allow a full review of common Army training by the DAT staff, especially training directed at junior leaders. This review will take into consideration current initiatives to increase the standards and operational relevance of common CF courses such as the Basic Military Qualification, the Basic Military Officer Qualification and the PLQ as well as the quinquennial review of the NCM and Officer General Specifications.

CONCLUSION

This article presents a very brief overview of the Army IT&E Rationalization Study and the associated Training Reduction Analysis. However, it is hoped that it also provides a sense of the complexity of our training system and the challenges that the DAT and CTC staffs faced in analyzing it.

Overall, we have gained a much greater awareness and understanding of how and why individual training is conducted, the relationships between production, course durations, and

resource requirements and the impact that manning levels in training establishments have on the need for augmentation taskings. More importantly, the study has given strategic visibility to the myriad initiatives and projects that have been launched and implemented over the last few years and which will have a beneficial impact in reducing augmentation taskings and time on course. Consequently, personnel tempo should be improved markedly.

On the other hand, as the former Commander of LFDTS, Brigadier-General Nordick, stated:

> *The outcome of Army Council [on 15 April 2004] indicates a solid understanding by the Army leadership that individual training is likely to increase, rather than decrease, in the foreseeable future. This is because of new technologies, an expanding array of equipment types, and the need to raise standards in some areas. It is a reality and one that we will have to manage closely, as it appears to be at odds with our desire to rationalize individual training and increase collective training.*[13]

This is why it is critical that we continue to rationalize the Army IT&E System, but that it be done in conformity with established processes and procedures, such as the ASAT and business planning.[14] The Directorate of Army Training is currently reviewing all common Army training to ensure that standards continue to be relevant and that ongoing CF initiatives are taken into consideration. This includes a complete review of Army officer training and education in Developmental Period 2. In addition, CTC and the Area training centres continue to work on a number of initiatives to increase efficiency, rationalize requirements and leverage technology, both to minimize resources but also to mitigate personnel tempo and increase our soldiers' quality of life.

END NOTES

1. Commander's Direction, Strategic Operations and Resource Direction 2004 AL1, Chapter 1.
2. "Rationialize" (3), *The Canadian Oxford Dictionary*, Don Mills, Ontario: Oxford University Press Canada, 1998.
3. A-P9-000-001/PT-000, CF *Manual of Individual Training and Education*, vol. 1, p. 10.
4. The IT&E Rationalization Study considered only the those Army MOCs where the Army is Managing Authority (Armour Crewman and Officer, Artillery NCM and Officer, Air Defence NCM and Infantry NCM and Officer), and at a later date, with CFSTG concurrence, this list also included the Combat Engineer and Army Engineer MOCs.
5. HQ Land Force Doctrine and Training System, 4500-1 (DAT 5-6), "Report to Army Council on Training Reduction Analysis," dated 1 April 2004.
6. This section is mostly based on the covering letter to the aforementioned report, which was also produced by the author of this article.
7. Annex A to Briefing Note to Army Council on IT&E Rationalization Strategy, "Summary of Army Training System Rebalance (ATSR) Audit," dated 29 Oct 03.
8. For instance, if a course is 20 training days long and has an annual production requirement of 100 individuals, then the total throughput associated with that course will be 2,000 student-days (100 students x 20 days = 2,000 student-days).
9. A decision was made early in the study to restrict the rationalization analysis only to courses for which the Army has full authority. Only Armour, Artillery (Field and Air Defence), Infantry, and common Army courses (such as Soldier Qualification, Primary Leadership Qualification-Land and Army Operations Course) were considered for reduction because they are completely under the management authority of the CLS. Combat Engineers, while actually part of the Combat Arms, are only partially managed by the Army.
10. HQ Army Individual Training Authority/Combat Training Centre, 4500-1 (G3), "Individual Training Rationalization Implementation Plan," dated 30 June 2004, p. 3/8.
11. HQ Land Force Doctrine and Training System, 4500-1 (DAT 5-6), "Commander's Direction-Rationalization of Individual Training and Education (IT&E)," dated 4 May 2004.
12. HQ Army Individual Training Authority/Combat Training Centre, 4500-1 (G3), "Individual Training Rationalization Implementation Plan," dated 30 June 2004.
13. HQ Land Force Doctrine and Training System, 4500-1 (DAT 5-6), "Commander's Direction-Rationalization of Individual Training and Education (IT&E)," dated 4 May 2004, p. 2/6.
14. Ibid.

FLEDGLING SWANS TAKE FLIGHT: THE THIRD BATTALION, PRINCESS PATRICIA'S CANADIAN LIGHT INFANTRY IN AFGHANISTAN

Lieutenant-Colonel P. Stogran

The process that is tactics includes the art of selecting from among your techniques those which create that unique approach for the enemy, time and place. Education is the basis for doing that—education not in what to do, but in how to think.

William S. Lind, *Maneuver Warfare Handbook*

INTRODUCTION

I am certain that it goes without saying that the deployment to Afghanistan for the members of the Third Battalion, Princess Patricia's Canadian Light Infantry (3 PPCLI), was a life-defining moment. More importantly, I would submit that the mission might offer us as an institution some insight into how we, as a professional military force, should be prepared to conduct operations in the future. I will not be so presumptuous as to suggest that our deployment represents a definitive template that we can follow in the years to come. Afghanistan is specific to circumstances of time and place, in the same vein as operations in Croatia in the Former Yugoslavia in 1992, were not a blueprint for Somalia, Rwanda, or any of the other watershed peacekeeping missions of the last decade—not to mention Operation Athena. Rather, I would suggest that our experience in Afghanistan demonstrates the need for us to be "brilliant at the basics" and, as professionals, fully prepared to apply ourselves and our profession to unexpected, unconventional scenarios.

Indeed, when I first took over command of 3 PPCLI, a battalion that was slated for disbandment under Army Transformation, I penned an article entitled—*Light Infantry Battalions: Fledgling Swans of a Joint Force*. In it, I described the importance and utility of light forces in the new world order. However, there was little interest in the paper. "We [the Army]," I was told on more than one occasion, "are not going there." The fact that this should be an obstacle to expressing one's professional point of view is an issue I will not even address in this forum. Nonetheless, neither the *Canadian Military Journal*, nor the *Army Doctrine and Training Bulletin*, displayed much interest in publishing the article, except the latter after we deployed to Afghanistan.

Incredibly, in the early days preceding the deployment, the officers and senior non-commissioned officers (NCOs) of the Third Battalion were actually confronted by a "Policy Emissary" from the Land Staff who, in a sense, admonished them for their expectation that a light battalion, even as the designated Immediate Reaction Force (IRF) would be so naïve as to expect to be deployed to a crisis in a third world country. The rest is history. Regardless, as unthinkable as 11 September 2001 was, I could not have written a more fitting final exercise for my tour with the Third Battalion than Operation APOLLO in Afghanistan. It is for that reason that I have entitled my presentation "Fledgling Swans Take Flight: 3 PPCLI in Afghanistan."

When we finally deployed to Afghanistan in January 2002, after a couple of months of anxious apprehension following the initial warning, I fully expected the lower levels of the Battalion to be fully engaged and challenged for the duration of our mission, however long it may be. But,

I must concede that I was worried that by the end of our tour overseas I might be in a position where I would have to grovel with the American Brigade Commander, Colonel Francis J Wiercinski, to get an opportunity to employ the battle group in a battalion-level operation. In the end, nothing could have been further from reality. In fact, we conducted four battalion level operations that reflected quite accurately the full spectrum of tasks that we were mandated to do when we deployed.

This chapter lays out a few war stories—war as I knew it, which was considerably different than war as our veterans knew it, and different from the peace support operations of the Cold War and post Cold War periods. But I believe that these war stories can generate some valuable deductions and lessons that we as an army should consider for future deployments.

LEAD-UP TO WAR

In the year prior to 11 September 2001, despite being earmarked as the IRF(L), 3 PPCLI was indeed being treated as an "equipment constrained" mechanized battalion that was earmarked for disbandment. A limited budget for training caused me to beat the bushes for any events or opportunities that existed elsewhere in the Army. We managed to secure several small unit exchanges, a position for participation in the British Cambrian Patrol Competition, equipment trials and peace support exercises overseas. These, I felt, would foster the combined and joint ethos within the Battalion that was vitally important for the land component of a rapid reaction force.

We also had the very good fortune of being the beneficiaries of a "buy-and-try" for Simunition (in essence a paint ball cartridge for the C7 rifle) that enabled us to have troops conducting force-on-force training, virtually on a daily basis for several months at little-or-no cost in the local area of the garrison. We were also very fortunate that Brigadier-General Ivan Fenton and Colonel Stu Beare, the Area and Brigade Commanders respectively, in the Army of the West, took on certain issues related to the IRF(L) as a matter of urgency during the pre-9/11 period. And, when our keystone training event with the Special Operations Group in Fort Lewis, scheduled for October 2001, collapsed due to their deployment to Afghanistan, Colonel Beare had the foresight to rent MILES 2000 simulation equipment for use in Dundurn, Saskatchewan to enable the Battalion to continue with its IRF (L) training. To his credit, this was long before there was any hint that 3 PPCLI would be deploying to Afghanistan. In the final analysis, it was the prolonged exposure that the soldiers of 3 PPCLI had with simulators such as Simunition and MILES that allowed me in good conscience to announce that we were ready for operations when the first warning came in mid-November. It was also a key element in our success while overseas.

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When the order finally came in January 2002, National Defence Headquarters (NDHQ) tasked us to conduct four types of missions in Afghanistan. Simply put, these were: airfield security, sensitive site exploitation, humanitarian aid, and combat operations. Initially, I thought that the reason why airfield security was singled out from combat operations was because NDHQ had envisioned it to be a task that Military Police might conduct, wearing body armour, a side arm

and soft cap to check ID at the front gate. Conversely, I believed that combat operations were singled out because of the direction we were given that whenever we were involved in an operation dealing with a person or persons who were confirmed to be Taliban or Al Qaeda, we were to do so under the Law of Armed Conflict. For any other operations, however, we were to adhere to Rules of Engagement (ROE). Clearly, we have come a long way from our watershed peacekeeping missions of the 1990s because the Rules of Engagement that we were issued were, for the most part, sufficiently robust for us to achieve our mission.

OPERATION VIGILANT—AIRFIELD SECURITY

The first battalion-level operation we mounted was the defence of the airfield. Up until we took over the line, the United States Marine Corps (USMC), followed by the 101st Airborne Division, were conducting patrols outside the perimeter in armoured vehicles. Notwithstanding, there had been several incursions on the perimeter that resulted in firefights. When we took over the line, I approached Colonel Wiercinski and asked him if we could put a "Canadian touch" on the way we dominated no-mans-land. To his great credit, bearing in mind the uncertainty of the environment at that time, he readily indulged my request.

As a result, I deployed our Reconnaissance (Recce) Platoon outside the wire to live with the Mujahideen who were working for the Coalition. They conducted patrols and manned checkpoints in the area surrounding the Kandahar Airfield. With our Coyote surveillance vehicle providing early warning 24/7 and our Recce Platoon providing command and liaison with the Mujahideen, the security environment around the Kandahar Airfield changed virtually overnight. So much so that the terrorists went underground and resorted to autonomously-launched rocket attacks (which were all but useless) and reseeding mines on patrol routes that had previously been cleared. I believe that this was the first step in breaking down a perception that existed within some armies of the world in regard to what Canadian soldiers were capable, or incapable, of doing.

OPERATION HARPOON—COMBAT OPERATIONS

The first and largest conventional combat air assault during Operation Enduring Freedom, codenamed Anaconda, was conducted by units of the 101st Airborne Division, supported by a battalion from the 10th Mountain Division. They deployed into the Shaw-I-Kot Valley. Sniper support for the attack was provided by 3 PPCLI. Interestingly, this seemed to be a source of some consternation within the Canadian chain of command. However, I argued that if the Americans were prepared to give us aviation support at the snap of my fingers, and they were, we could hardly deny their request to provide them snipers armed with our .50 caliber rifles. And the services of our snipers were gratefully received!

Subsequently, Operation Harpoon, our first combat air assault, was the sequel to Anaconda. The aim of the mission was to clear the mountain known as the "Whale," a huge feature that formed the western shoulder of the Shaw-I-Kot Valley. It was held by Al Qaeda forces armed with heavy mortars and machine guns. In a matter of days, 3 PPCLI moved from Kandahar to Bagram, conducted their battle procedure and launched on the assault. Timings were so tight that the 81mm mortar tubes literally arrived only hours before they had to be loaded on the Chinook helicopters and troops were virtually picking up mortar ammunition from the ramp of the C-130 Hercules aircraft as they moved to the Pick-up Zone (PZ) for the air assault.

The Canadians were warned to expect 60 to 100 enemy, but contact turned out to be minimal. Although the soldiers were quite disappointed that the opportunity to really test their close combat skills had eluded them, the mission had demonstrated to the coalition and the world once again, the tenacity, professionalism and resolve of the Canadian soldier.

OPERATION TOR II—SENSITIVE SITE EXPLOITATION

Operation TOR II was a battalion-level sensitive site exploitation operation. In essence this means a reconnaissance-in-force task with the intention of gathering information and evidence on Al Qaeda. The objective area for this task was Tora Bora, the area where Osama Bin Laden had made his last stand against coalition forces in November 2001. As nothing had been heard from Bin Laden since his ill-fated defence, it was thought that he may have actually died there. The intent was for elements of the Third Battalion to search the area of the cave complexes that were reported on by CNN and hopefully discover the fate of Bin Laden.

The mission was delayed because US Special Forces (SF) were required to go in to the area first to find Landing Zones (LZs) in the extremely rugged country. This gave the troops more time for mission rehearsal in Bagram. In anticipation of very steep terrain in the objective area and the possibility that the "CNN caves" had vertical shafts, Bagram was overrun by a bunch of "green Spidermen," as the soldiers hung off any vertical structure they could find to practice their mountain operations skills and to develop procedures for vertical assaults and cave clearing.

The level of professionalism and capability was quickly demonstrated. The American SF troops were shocked when 3 PPCLI Recce Platoon established the screen in the high mountain ranges in only eight hours after insertion into the LZ. This was less than a third of the time that the SF soldiers estimated it would take to get into position. Combat engineers literally moved tons of earth searching for cave entrances that may have been covered by the air strikes using JDAMs. Infantry used demolitions to clear LZs for future insertions and they destroyed over thirty well-prepared bunkers to deny future use to the Al Qaeda.

The Battalion also exploited a target of opportunity by exhuming over twenty graves of Bin Laden's personal bodyguards who were buried in a nearby village. Unsure of how receptive the locals would be to the suggestion of exhuming the Al Qaeda fighters, we proceeded with caution and security, but as soon as they recognized that the coalition troops were not there to burn their opium crops, they welcomed them with open arms. They even provided technical advice to ensure that the graves were handled with proper Islamic protocol.

Although we did not find the body of Bin Laden, the mission was nonetheless a success. We exhumed a large amount of evidence on the Al Qaeda, denied them future operations in the valley, and demonstrated that the Coalition was prepared to go anywhere, anytime to close with and destroy the Al Qaeda. The operation also, once again, showcased to the Coalition the skills and capabilities of Canadian soldiers.

OPERATION CHEROKEE SKY

Operation Cherokee Sky was conducted in July just prior to the cessation of operations. It represented the first time the entire Battle Group conducted an independent operation. Cherokee Sky was originally intended as the first phase of a three phase operation in which the

Coalition was going to extend it's influence into the Zabol Province, the Governor of which was known to have been working with Taliban and Al Qaeda forces.

I suggested that, if all of the 3 PPCLI Battle Group assets could be freed up from the airfield, it could complete all three phases of the operation within a week. As a result, Recce Platoon, for the first time in the deployment, conducted tactical recces for the Battle Group instead of the US Special Forces. They identified a probable training facility in the Governor's 13th Century Fort, which dominated the entire area surrounding the capital city of Qalat. As a result, I intended to exploit the shock action potential of the Coyote Light Armoured Vehicles to contain the Fort and conduct simultaneously a sensitive site exploitation operation. However, the Coalition chain of command directed that the operation should take on a less aggressive posture in order to avoid potentially alienating the Governor who had a link, however tenuous, with the leader of the Afghan interim authority, Hamid Karzai.

This was the tact taken and the Battle Group actually conducted a joint operation with the Afghan Military Forces to capture Taliban and Al Qaeda forces that the Governor had alleged were resident in the Shinkay Valley. Shortly after gaining lodgment into the valley it became very clear to me that the whole operation was a ruse and I expressed my extreme displeasure in no uncertain terms to the commander of the Zabol Forces. The Battle Group exfiltrated and redeployed to Kandahar, feeling disappointed at the failure of closing with the enemy. Nonetheless, the mission was far from a failure. In an effort to save face from his sham, the Governor turned over almost 30 surface to air missiles (SAMs) to the US Special Forces—very much a high payoff target for the Coalition.

GRASS ROOTS HUMANITARIAN AID ASSISTANCE

When we were warned for duty in Afghanistan we were certainly excited at the perceived risk and adventure associated with the mission—a combat mission. But, when it came to getting assistance from the Canadian International Development Agency (CIDA) for humanitarian aid, it was a common perception that the combat nature of our mission also worked against us. In the early days when it looked like we were going in as part of the International Security Assistance Force (ISAF), CIDA had offered to give us some seed money for humanitarian assistance (HA). However, when we actually deployed as a combat mission they distanced themselves from us and never did come across with any aid.

This aversion of aid agencies to cooperate with military forces is not new. Indeed, Major-General Romeo Dallaire's trials and tribulations with aid agencies in Rwanda are well documented. The time is long overdue, however, for agencies such as CIDA, to pull their head out of the clouds and face realities. In an effort to preserve their own perception of impartiality aid agencies refuse to cooperate with military forces. It would seem that they prefer to withdraw their support when environments become insecure with the resultant hardship on the civilians, often leading to the death of thousand, rather than work with militaries, for fear of compromising their principles and / or impartiality. Some even argue that we as a military are not using coercive action to establish pre-conditions to enable the local populous to re-build their lives and their nations. For aid agencies to suggest that Canadian troops deployed to Afghanistan, with the mission of destroying the Taliban and Al Qaeda for any other reason other than to support international stability and allow the Afghan people to re-build their nation is absolutely ludicrous. Indeed, the Canadian Army's track record demonstrates that we put our

lives on the line continually in an effort to allow others to enjoy individual rights and the rule of law. What can be more altruistic than this?

As excited as we were at the prospect of combat operations, the soldiers wanted to help the people who lived in the vicinity of the Kandahar Airfield. When no funds were available from any governmental sources, the troops pitched-in and raised almost ten thousand dollars of their own money to get school supplies. They asked friends and relatives in Canada to help out. They recruited the assistance of Canadian business people in Dubai who contributed tens of thousands of dollars to their cause. In the end, they made a huge impact on the quality of life for the people of Kandahar in many, many ways. When we send Canadian soldiers overseas, even for combat duties, we are exporting Canadian values. Afghanistan has demonstrated that Canadian soldiers are the most committed and cost-effective aid workers in the world.

CONCLUSION

I think even the steadfast conventionalists amongst us would find it difficult to argue that we are not living in a century of unexpected, unforeseen surprises. Increasingly, military forces will be called upon to deal with asymmetric threats such as terrorism, transnational crime and rogue states that support those threats. Given this, what are the implications for the Canadian Army, particularly in light of the Afghanistan experience? I propose a number of deductions / lessons based on my experience.

INTEROPERABILITY

Firstly, our expectations in terms of a future concept of operational employment will have to be commensurate with capability. In Afghanistan, it was suggested to me that 3 PPCLI should not have been under Operational Control (OPCON) to the Americans as we were, but rather we should have been given our own Area of Operations (AO) much like the British in ISAF. I would suggest that this premise borders on the unthinkable unless the operation we are involved in is 'pedestrian in the extreme.' Unless we are prepared to deploy into an AO with all the aviation, tanks, fire support, tactical and strategic service support that we need from Canadian resources—we should fully expect to have a command and control (C2) relationship with coalition partners similar to the one we witnessed in Operation Enduring Freedom. That being the case, we must cement our relationship with the US Army in order to overcome some problems with interoperability. Some that we experienced include:

Our expectations in terms of a future concept of operational employment will have to be commensurate with capability

- FACs/ETACS must work with the US Air Force to build trust, because ours were not certified;
- No Foreign (NOFORN) classification prevented us from obtaining a lot of intelligence;
- Strategic decision making / targeting of tactical missions / targets by the Canadian Forces must be rationalized. We should either rely on the decision-making ability of battle group commanders in the AO to act as operational commanders or spell out to future coalition partners the role that the DCDS and NDHQ will take in tactical decision-making.

- Strategic issues such as detainees, and use of mines will never go away and will be situationally dependant. While they could conceivably have an effect on military operations, I think we will just have to live with that.

NEO-JOINTISM

I find it very frustrating that the Canadian Forces pursuit of "jointness," has in reality, amounted to little more than rhetoric. And while "jointness" in the classic sense seems to be a concept that will never be resolved in the Canadian Forces, I would submit that we are going to have to break down other stovepipes and join forces with other organizations in Canada in order to deal with the emerging threats! This "neo-jointism" would see the CF working very closely with agencies such as:

- Canadian Security Intelligence Service (CSIS);
- Canadian International Development Agency (CIDA);
- Royal Canadian Mounted Police (RCMP); and
- Department of Foreign Affairs and International Trade (DFAIT).

PRECISION

If we are going to deal with in-extremis scenarios that do not resemble anything found in the "DS Pinks" of our staff colleges. Army jargon must be more precise. To function effectively in the command and control environments that we could face in the future, we should have water-tight definitions of what things like national command, operational control, tactical command and tactical control mean.

SOPHISTICATION

Soldiers must be more sophisticated than ever. One area that we must develop and become more conversant with is the Laws of Armed Conflict (LOAC). When I was a Battalion Commander on a computer assisted exercise (CAX) in an urban environment, the Brigade Commander directed that there was to be no collateral damage because of the requirement to hand the area back to the civil authority in the post-conflict period. Some of my colleagues objected to this, arguing it was a manifestation of the peacekeeping agenda—an agenda that has long undermined our warfighting ethos. I would argue that if we really understood the LOAC regarding proportionality and the relative importance of military targets both my brigade commander and my colleagues would have approached the matter from a different perspective. Other areas that we must become more sophisticated in are:

- Dealing with media;
- Gathering evidence;
- Non-lethal weapons so that soldiers have alternatives other than doing nothing and using lethal forces—and not only for so-called crowd confrontation operations. In addition, close combat skills will have to be more refined and discriminatory; and
- Humanitarian aid should take on an integral role in all military operations.

THE LEGAL IMPERATIVE

Personal experiences with members of the Judge Advocate General (JAG) branch, who were completely anonymous to me, indicate that if our military force is going to avoid becoming marginalized by other armies, the chain of command is going to have to come to terms with the spin that our JAG branch puts on international laws and conventions. In Afghanistan, we had a Strategic Targeting Policy that applied to the tactical objectives because exuberant JAG lawyers argued that we could not allow Canada to become liable under international laws by actions from the tactical level. In fact, the constraints and bureaucratic red-tape extended to all facets of the operation. While we were arguing about the legal status of our CSIS representative, whether or not he could wear a Canadian uniform or participate in military operations, the FBI, CIA, and British operatives were fully engaged in Afghanistan.

I would argue that international law is sufficiently vague, outdated and often out of touch with 21st Century realities and inconsistent enough in terms of precedence to demand that our JAG branch take a more pragmatic approach to operations. A Legal Officer actually told me that we had to have a strategic targeting mechanism for tactical targets so as to avoid a situation such as the aftermath of the crimes committed in Somalia where the Canadian Government was sued by the families that suffered. Those claims were settled out of court, which in legal terms is a form of avoidance and not an admission of guilt.

CONCLUDING COMMENT

If some of my comments come across as being controversial, then so be it. If we are going to defeat the multitude of threats that face us in the new millennium, we are going to have to slay some sacred cows and that is going to take some serious debate. No longer can we rely on teaching our brethren what to do (e.g. Operational Planning Process (OPP), Intelligence Preparation of the Battlefield (IPB)). Rather, success will lie in teaching them how to think.

URBAN PATROLLING

Captain A.J. Gimby

ISSUE

Since the 3 RCR Bn Gp arrived in Kabul, Afghanistan, we have encountered every variety of urban terrain. Although the principles of urban patrolling continue to apply, specific threats, the battle space and the nature of our mission have forced us to refine these principles. In essence, we have taken those basic principles and made them Kabul specific. In an attempt to find the best patrol configuration and type, we have tried a myriad of combinations of dismounted and mounted patrols.

AIM

The aim of this article is to relay how the threat, battle space and mission within Kabul have forced us to refine our urban patrolling skills. It will focus primarily on the battle space, dismounted/mounted patrols, equipment, patrolling at night and patrol posture. The goal of this paper is to give the reader a better understanding of the problems that have been encountered and what solutions have been devised to counteract them. The reader should understand that the basic principles of urban patrolling are not being argued, just adjusted and refined for Kabul.

DISCUSSION

THREAT/BATTLE SPACE

The urban battle space of Kabul is what you could expect of any war-ravaged city. There are, however, certain factors that make Kabul a unique environment to patrol. Kabul is a very densely populated city, which causes several problems when patrolling its streets. These factors have a significant impact on security concerns, as well as making some areas within the city practically impossible to navigate at certain times during the day.

This situation has forced patrols to alter routes through the city so they can avoid becoming bogged down in the streets. Due to this congestion, it is also necessary to maintain 360-degree security around the vehicles at all times. In many of the market places, it can become so congested that civilians are no less than a few inches from the vehicles. A previous contingent has already reported having a grenade dropped into one of their jeeps by a passing civilian. Despite this, patrols must still travel through these areas regularly, in order to maintain a strong presence. What we have discovered is that certain types of patrols are better suited to these areas than others.

Kabul is a densely populated urban centre with heavily congested streets where locals (mounted and dismounted) move in close proximity to patrols. Traffic and pedestrian control is nearly extremely limited.

Unlike most cities, Kabul has absolutely no traffic laws or any means to control intersections. These two factors create a challenge when conducting mounted and dismounted/mounted patrols.

There are certain areas of the city that have fairly wide and paved roads, but a substantial portion is made up of narrow alleyways with eight foot high courtyard walls on both sides. In addition, an open sewer trench normally runs down the center of the alley further hampering vehicle mobility. LAV III's are unable to manoeuvre through these narrow alleys, and Iltis can be restricted from patrolling these areas as well.

Restricted alleyways bordered by high walls and poor drainage, which all limit mobility, characterize a substantial portion of the city.

The threats within the Canadian area of operations (AOO) have also forced us to re-evaluate certain aspects of our patrols. The most prevalent threat that patrols face is an improvised explosive device (IED), whether that is a vehicle born improvised explosive device (VBIED)—a suicide bomber—or remote controlled improvised explosive device (RCIED). The threat of a dismounted suicide bomber has had the same impact. Patrols also face the possibility of direct action (i.e., ambush). Our reaction to this threat is reflected, primarily, in our "Actions On Drills" as opposed to the actual conduct of the patrol itself.

The last threat that patrols face while patrolling Kabul and its environs are mines. Afghanistan is one of the most heavily mined countries in the world, and the threat of coming across old mines is substantial. This threat has affected where our patrols are able to go and what specific type of patrol is required for certain areas. Several areas on the outskirts of Kabul are only traversable by armoured vehicle, due to the mine threat. Therefore, only mounted patrols are able to move through these areas.

Improvised explosive devices (vehicle born, remote controlled and dismounted suicide bombers) are the most prevalent threat to patrols, certainly in the urban area. Mines are a significant threat in the rural outskirts of the Kabul.

DISMOUNTED PATROLS

There are several advantages and disadvantages to conducting purely dismounted patrols throughout the environs of Kabul. The city provides an interesting mix of modern but war ravaged streets and old alleyways that are often barely more than a metre wide. Good portions of these alleyways are so narrow that even an Iltis could not fit through them. As well, these alleyways have a sewer ditch that runs down the center providing another obstacle for vehicle traffic. Even for those alleyways that a vehicle can fit through, the civilian traffic can make them almost impossible to travel. Dismounted patrols are able to overcome each of these obstacles because the narrow alleys or the crowded civilian traffic does not restrict them.

Dismounted patrols are able to overcome any obstacle to movement in the built up areas.

Dismounted patrols also provides for excellent interaction with the locals. Since one of the most important tasks that the patrols perform on ISAF IV is gaining information, it is very important that the local population trust us. Dismounted patrols accomplish this by presenting a less threatening posture. It is much easier to talk and mix with the locals when you are on foot rather than speeding by in an Iltis or large armoured vehicle. This indicates a certain degree of trust, as well, as sending the message that we are not intimidated or scared to move around without an Iltis or LAV III.

Dismounted patrols are better able to interact with the locals and are therefore a more effective method of gaining trust and collecting information from the locals.

Although most of the patrols and observation posts that we conduct are overt, there are times when covert patrols or observation posts are the best option to accomplishing the mission. In order to accomplish this task, dismounted patrols are obviously the best option due to their ability to be stealthy. It is almost impossible to move into a position in an Iltis or LAV without the local population knowing where you are.

The insertion of covert Ops in Kabul is best achieved by means of a dismounted patrol.

With all the benefits that dismounted patrolling presents, there are still, inevitably some drawbacks. Dismounted patrols tend to be the most vulnerable to both indirect and direct threats. The most prominent reason for this is that a dismounted patrol lacks integral transport. This means that if they do come under contact, whether that is an IED or direct action, they must literally dig in until the quick reaction force (QRF) can reach them. Depending on which portion of the AO they are in it could take up to 30-45 mins before the QRF is in their location. They must have the ability to be self-sustaining for this period.

Dismounted patrols are more vulnerable to attack (slower moving, less protected) and are unable to quickly extract themselves from such situations.

Dismounted patrols can also be very manpower intensive. At a minimum, a dismounted patrol should have at least six soldiers, but it is preferable that it be a full eight-man section. One interpreter, and if it is a joint patrol, possibly two Kabul City Police officers will augment this number. This will also be affected by the fact that a platoon is normally operating at approximately 75% strength for a large portion of the deployment due to home leave travel assistance (HLTA).

Dismounted patrols can be manpower intensive, especially to a platoon experiencing shortages due to leave.

Dismounted patrols also have the tendency to be very fatiguing due to the weight each soldier is carrying for an average distance of 12 km. A section should not be expected to conduct purely dismounted patrols each day.

Approximately 50% of dismounted patrols are conducted in conjunction with Kabul City Police. This is important because the role of ISAF forces is to take a "second row" approach by assisting the local police and military units in providing security for Kabul and its environs. Through this "second row" approach, ISAF can foster a professional approach to security and policing tasks by gently nudging the police and military in the right direction. One of the best ways in accomplishing this is through joint patrols and vehicle check points.

Joint patrols with the Kabul City Police (KCP) is one of the best methods of fostering a professional approach to security and policing.

Normally, a patrol will request two police officers to accompany them on a patrol or assist in a vehicle check point. For vehicle check points, the patrol will provide security and run it from behind the scenes. Depending on the level of professionalism of the police, the patrol commander will determine how proactive a role is required by the patrol. The intention is to

allow the police to conduct the searches with direction from the patrol commander, when required.

By conducting joint patrols, ISAF can also ensure that the police are patrolling every portion of their police district during all times of the day and night, which is not always the case. The most significant disadvantage to joint patrols is that locals will be less inclined to offer information due to the presence of the local police. Throughout Kabul, police corruption is a serious problem and because of this, the locals do not readily trust the police.

As a result of past practices, including corruption, the KCP has not yet gained the trust of the people and so information gathering is less easy when conducting joint patrols with them.

Interpreters are a necessity for patrolling Kabul. The most important job that patrols do is to gather information from the locals. Without an interpreter, this is virtually impossible. It is vital that the patrol commander impresses upon the interpreter the need to pass on everything that is said during a conversation. Because many of the interpreters are young students, they tend to get easily intimidated by the Kabul City Police KCP and AMF. This can result in threats and other certain pieces of information not being communicated until after the meeting is complete. The patrol commander must guard against this.

Patrol interpreters are a necessity and they must be instructed to repeat everything stated in conversations at the time of the conversation.

DISMOUNTED/MOUNTED PATROLS (ILTIS AND BISON/LAV)

This method of patrolling sees the dismounted patrol being conducted in conjunction with a mounted patrol. This solves the major disadvantage of dismounted patrolling by providing it with integral transport. If the dismounted patrol were to come under contact, they would be able to extract themselves by vehicle and not have to wait for the QRF to arrive. This configuration provides for flexibility, not only if the patrol were to have an incident, but also for the actual conduct of the patrol itself. A LAV III or Bison enhances the patrol's protection and firepower if required, but the Iltis can also be used to extract a patrol and provide extra support through the mounting of a machine-gun

Dismounted/mounted patrols also enhance the "foot print" of a single patrol. While the dismounted troops conduct one patrol, the mounted portion can also conduct a mounted patrol on an alternate route. This increases the size of the area that a single patrol can influence in the same timeframe.

This configuration does have one major draw back. Dismounted/mounted patrols are the most manpower intensive due to the requirement for vehicle security and maintaining a minimum of six dismounts on the ground, once again reinforcing the benefit of a full eight-man section for patrols. For each type of vehicle, the personnel requirements vary as follows:

Iltis. There are minimum two Iltis per patrol and there must be two personnel in each vehicle. There will always be one driver and one security. Since there is a requirement for at least six dismounts in a patrol that also means that a third Iltis would be required.

LAV III. For the LAV, there is a requirement for a minimum of four personnel in order to crew the vehicle and provide security. There will be one driver, one gunner, one crew commander, and one air sentry for rear security.

Bison. The Bison has a requirement for a minimum of three personnel to crew and secure the vehicle. This includes one driver, one gunner/commander, and one air sentry.

Beyond the personnel required to crew the vehicles, the dismounted portion of the patrol must be composed of at least six personnel. This greatly increases the number of soldiers required for each patrol. This configuration can be difficult to maintain over an extended period when manpower issues, such as HLTA, are factored in.

Mixed mounted and dismounted patrols solve the major disadvantage of dismounted patrolling. As well, the enhancess patrol effects in terms of area covered and influenced. However, dependent upon vehicle type, human resources become a challenge, of varying degrees, even for a platoon.

Specific recommendations for patrol configurations have been included in the recommendation portion of this paper. The most important factor to consider is that the mounted portion and dismounted portion of these patrols work together, not separately. The mounted portion can either conduct a separate patrol, an OP, or follow in behind the dismounts providing close support.

MOUNTED PATROLS

Mounted patrols can involve an Iltis, Bison or LAV III. The most apparent advantage of conducting mounted patrols is that force protection is greatly increased. This fact is even more evident when considering the LAV III or Bison armoured vehicles. Mounted patrols are a necessity throughout numerous areas of Kabul and its local environs, due in part to the extensive mine threat. Patrols consisting strictly of Iltis can be conducted within the city and are excellent for liaison patrols with local authorities. Those areas, on the outskirts of the city, that have an increased mine threat can only be patrolled by armoured vehicles.

Mounted patrols in armoured vehicles are a necessity in numerous outlying areas of Kabul because of the mine threat.

Mounted patrols also have the added advantage of not being limited by distance to the patrol's objective. They are able to reach any police district throughout Kabul, no matter how far it is from Camp JULIEN (CJ). This is a significant advantage over purely dismounted patrols. Several areas throughout the Canadian AO are only accessible by vehicle due to their distance from camp. Very few of the police districts can reasonably be reached by foot and require some type of transportation to the patrol area.

This type of patrol is also much less manpower intensive than either of the other two configurations mentioned. This fact makes them much easier to sustain over time. The maximum number of personnel required would be six for an Iltis patrol. The manpower requirements for the Bison and LAV III were commented on previously.

Mounted patrols are much easier to sustain, especially when human resources are limited.

Despite all the advantages of mounted patrols, some key disadvantages make this a less desired approach to patrolling. Mounted patrols provide for less interaction with the local population and could easily intimidate the civilians. Driving around in large armoured vehicles can convey

the impression that we are part of a conquering army or at least a force of occupation. This can be extremely detrimental to winning the trust of the population. Admittedly, there may be instances where intimidation is the preferred approach to dealing with specific personalities, but it is neither desirable nor necessary that we portray this image to everyone, all the time.

Mounted patrols do not have the effect of gaining local trust and armoured patrols are intimidating, which is often undesirable.

The other significant disadvantage to purely mounted patrols is that the patrols become limited as to where they can go. Their area of influence during the patrol will be reduced do to their inability to reach significant portions of the Kabul urban core. These types of patrols are much more useful on the outskirts of the city where the mine threat is higher and a greater number of the roads are hard or soft packed dirt and more readily traversable by vehicle.

PATROLLING AT NIGHT

It is essential that a presence be maintained throughout the AO at night. This is of paramount importance because it is during this timeframe that criminal activity and possible terrorist movement is most likely to occur. It is important to note that large portions of Kabul, especially the rural areas, are without streetlights so much of the city is in darkness. This means that the patrols must use either night vision goggles (NVGs) or white light, which will be determined by whether the patrol is covert or overt in nature.

Patrolling is required at night to counter criminal activity and terrorist movement.

Covert patrols or observation posts are used primarily when there is an area or specific target that we are interested in gaining more information about without attracting attention. This normally pertains to possible threats against the Transitional Authority or ourselves. The majority of the patrols we conduct are presence patrols, which are overt in nature. It is important that the people see the patrols in order to know that we are always in the area as a deterrent against any opposition military forces.

A significant percentage of night patrols are joint patrols with the Kabul Police. These patrols are overt in nature and use white light through the alleyways. One of the greatest threats that can be encountered in these alleyways is civilians on the courtyard walls protecting their houses. To minimize the threat, white light is used and Kabul Police precede the patrol, under the patrol commander's direction.

Overt presence patrols enhance local confidence in the security state. The employment of joint KCP/KMNB patrols using white light and the KCP leading avoids mistaken identity and accidental attacks on the patrols from locals protecting their property.

EQUIPMENT

The equipment carried by each soldier does not change whether conducting a dismounted patrol or mounted patrol, by day or by night. When determining the equipment to be taken on a patrol it is imperative that the patrol commander knows that if a situation arises they need to be able to sustain and defend themselves until help arrives. This could take from 45 minutes to 3 hours depending on the location and the type of incident. We have instituted a minimum

requirement for each patrol, but this is only the minimum and the patrol commander can tailor this for any given patrol based on the mission. The minimum load per soldier is outlined in the recommendation section.

It is important to remember that each patrol must be prepared to sustain themselves and defend themselves until the QRF arrives (up to 3 hrs), should an incident occur, and that includes being able to fight in hours of reduced visibility.

BATTLE PROCEDURE

All steps of battle procedure are vitally important, but there are a few that must be emphasized repeatedly, no matter how many times a patrol has been through a certain area. Before each patrol, a detailed set of orders must always be given to prevent the soldiers from falling into too much of a set routine. Intelligence sources are constantly identifying new threats to ISAF personnel, which reinforces the need for constant vigilance.

Equipment maintenance is another step of battle procedure that must be strictly adhered to. This maintenance includes not only personnel kit and weapons, but vehicle maintenance must be stressed. The Iltis is at the end of its life cycle and must be properly maintained due to the constant use in harsh conditions. This responsibility falls on the patrol and platoon to ensure that detailed inspections are conducted daily (at a minimum) and any faults are reported immediately. If the vehicles become unserviceable then patrols cannot be conducted.

The last step of battle procedure that must be emphasized is rehearsals. Due to the constant threat to patrols from improvised explosive devices, suicide bombers, direct action and mines, "actions on drills" for each of these scenarios must be practiced diligently prior to each patrol. The greatest threat to a patrol is complacency and constant rehearsals guard against this.

POSTURE

Although this is a short point it should be considered extremely important and almost vital to the accomplishment of a patrols mission. The patrols outward posture should always begin as non-aggressive. If the patrol walks through the streets with their weapons in the shoulder and at the ready or take a knee each time the patrol stops, the local population will be less inclined to interact with you. This type of posturing will also instill a sense of fear and intimidation in the population and not one of trust. Although there will be times when intimidation or aggressiveness is what you want to portray, they are usually not in reference to the general population. By being approachable to the locals, they will feel more at ease when talking to the patrol. By gaining this trust, the patrol will be able to obtain greater and more vital information from the local population. It is important to note that by taking a non-aggressive posture the patrol is in no way less vigilant or less prepared for any situation that may arise. Much of what we do is winning the hearts and minds of the local population and this cannot be done through outward aggression.

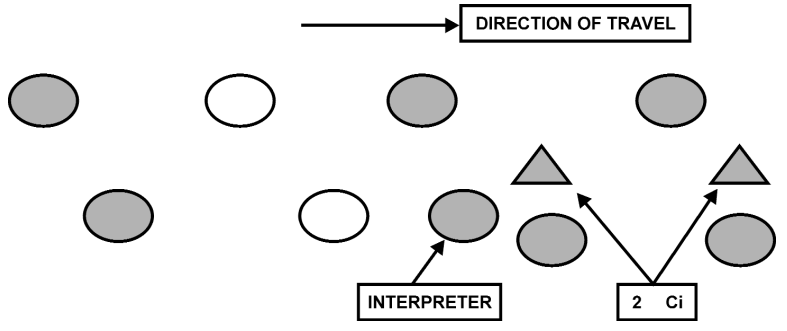
The patrol will be able to gain greater and more vital information from the locals by being approachable rather than intimidating. The patrols outward posture should be friendly and non-aggressive while maintaining vigilance.

RECOMMENDATIONS

DISMOUNTED PATROLS

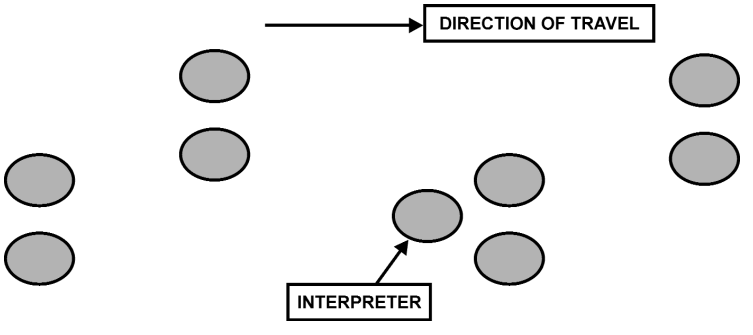
Dismounted patrols are a necessity to completely dominate the AO. They are able to patrol through the narrow alleys and back streets in which vehicles are unable to go. This method of patrolling also provides for the best interaction with the local population, thus aiding the patrol in gathering valuable information. Specific recommendations are as follows.

Formations



This Formation can easily be adapted to a six-man section by simply removing one fire team, represented by the clear ovals. The two CivPol are positioned so that the patrol commander can maintain communication with police officer via the interpreter and the constable can move at the front of the patrol. It is important to note that even though the constable is at the front of the patrol the patrol commander directs him on the route. The constable is at the front as a security measure. By having him go first he is able to inform locals that it is an ISAF patrol. This is especially important at night.

8-Man Dismounted Patrol with CivPol



This formation provides all around security for the patrol and for the individual fire teams. In this formation, the soldiers stand back to back. This is important because once the patrol stops moving they will normally be mobbed by adults and children. It is common for the locals to grab at the soldiers' back; as well, it becomes increasingly difficult to identify threats as the crowd increases. This formation aids in providing "back to back" security against locals and any possible threat.

Unless the area that you are to patrol is close to the camp, it is necessary that the patrol be dropped off and RV with the vehicles at a pick-up point. The ideal vehicle for this would be a Bison or LAV III because an Iltis drop-off is extremely manpower intensive.

During a dismounted patrol, communication between members of the patrol is vital. This is particularly noticed when moving through crowded market areas or in the tight back alleys during the day or night. The PRR radio is a vital piece of equipment that allows the patrol members to be in constant communication with each other. The Situational Awareness System (SAS) could also greatly enhance the Tactical Operations Centre's (TOC's) situational awareness. In the dismounted role this system, although beneficial, would become a detriment due to its weight and size. The soldiers are already carrying an average of 70 to 80 pounds of equipment. The additional weight of the SAS would significantly fatigue a soldier and slow the patrol.

As mentioned previously, a dismounted patrol should, as a minimum, be comprised of at least six soldiers. Preferably, the patrol should have eight members, but as always, flexibility is a necessity once in-theatre leave begins.

DISMOUNTED/MOUNTED PATROLS (ILTIS AND BISON/LAV)

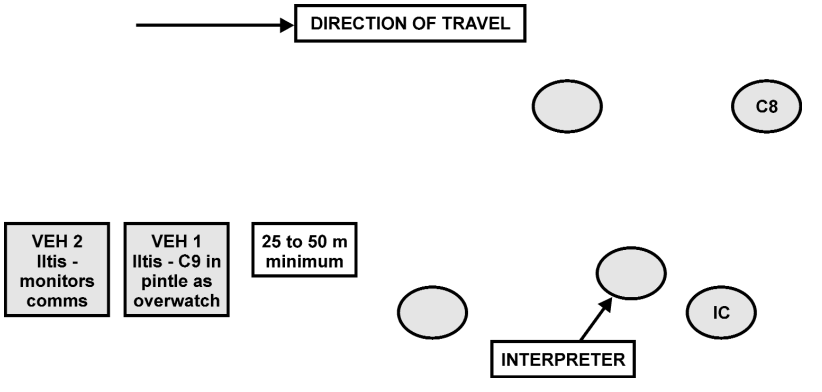
Three possible configurations that have been utilized while conducting dismounted/mounted patrols are:

♦ The vehicles remain with the dismounted portion of the patrol always ensuring that they stay within 100m (ground depending) of the dismounts. This way they are able to provide quick support if required. This method works quite well with Iltis vehicles, but not necessarily with Bison or LAV III.

♦ Another option is that the vehicles move independently of the dismounts and conduct a mounted patrol. The two patrols may move independently, but they still work in conjunction with each other. They should maintain constant radio communications and can set up RVs during the patrol. This type of patrol is manpower intensive when using the Iltis, but is much more advantageous if using a Bison or LAV III. One is also able to cover a greater area of the AO thereby maximizing the time spent on patrol. The mounted portion can also be used as an integral QRF for the dismounts if they come under contact.

♦ Lastly, once the dismounts have been dropped off the vehicles can move off to a position of over-watch and conduct an OP. This method can utilize Iltis, but a LAV III would be best-suited due to their optical.capabilities.

Mounted/Dismounted Patrol Formation:



This example of a mounted/dismounted patrol has the vehicles following in behind the dismounts. Other options could be using the vehicles as a mounted patrol along a different route, but this would require more manpower unless a LAV III or Bison were to be used. Another option is to have the vehicles leap frog the dismounts moving to a position, which would provide overwatch for the movement of the dismounts.

No matter which vehicle is being used, it is extremely important that 360-degree security is maintained at all times. This is particularly important in densely populated areas. In order to maintain this security, the Iltis has been modified so that one of the rear seats is facing to the rear. In a LAV III or Bison, this is easily accomplished with an air sentry.

One of the threats previously mentioned is VBIED's. In order to counter this threat, vehicle spacing while on the move is extremely important. The goal is to force the terrorist to choose between one vehicle and the other. This will hopefully save the lives of the soldiers in one of those vehicles. As a rule, there should be at least 100 m between vehicles while moving. This, of course, will be dependant on the ground and area that you are patrolling.

MOUNTED PATROLS

The most identifiable drawback to strictly mounted patrols is the way that the local population perceives you. Large armoured vehicles hamper the patrol's ability to interact with the locals and gain their trust. This is also the case for Iltis patrols, but to a lesser extent. The two advantages that an Iltis mounted patrol has over a LAV III or Bison patrol is that the soldiers are visible to the locals. This provides a modicum of interaction. The Iltis also tends to be much less intimidating than a large armoured vehicle. To counter this lack of interaction with the locals, the patrol commander must endeavour to stop periodically and talk to the local population. This still does not give you the same quality of interaction that is obtained during a dismounted patrol, but it is a partial solution.

Mounted patrols are best suited for specific tasks. The most obvious of these tasks would be the conduct of liaison patrols with the local authorities. This is acceptable because the main goal of this kind of patrol is to talk to the authorities and not the people on the street. It is important to note that if a mounted patrol is conducted then a dismounted or dismounted/mounted patrol should also be conducted before, after or during to talk to the locals.

Anytime a patrol is mounted and there is more than one vehicle, a minimum spacing of 100m must be adhered to. This will prevent both vehicles from becoming incapacitated by a Improvised Explosive Device.

PATROLLING AT NIGHT

Patrolling at night is necessary in order to dominate the AO. To accomplish the task, a combination of NVG and white light can be used, depending on what the patrol is trying to achieve.

Depending on the visibility at night, NVGs are a definite prerequisite for patrolling. If conducting a patrol or an OP, NVGs are a great asset because many areas of the city have limited lighting at night. They are a great aid in identifying threats long before the individuals know that you are there.

When conducting joint patrols with the local police, a combination of white light and NVGs is advised. This type of patrol is overt because it is important that the local population see the cooperation between our forces and the local police.

No matter what time the patrol is scheduled, NVGs should be carried at all times. Even if the patrol departs early in the morning, they should always be prepared to stay out after last light. Always be prepared.

Sophie thermal imagers have also proven to be a great asset to dismounted and Iltis patrols. They provide an easily man portable Thermal Imagery system that can enhance a patrols effectiveness at night. They are particularly useful if used in an Observation Post, but are also a valuable tool for patrols.

EQUIPMENT

Below is a list of the standard load expected of a section when on patrol. It is important to remember that this is just the basic load and that equipment can be tailored for each patrol.

Radios

Dismounted Patrol

For a purely dismounted patrol, soldiers should have their PRR for communication within the patrol itself.

One 522 ManPac must be carried so communications can be maintained with the Tactical Operations Centre.

Dismounted/Mounted Patrol

The dismounted portion of this patrol will carry the same number and types of radios as previously mentioned.

The mounted portion of this patrol must also maintain communications with the dismounts and the Tactical Operations Centre. For a LAV III or Bison this can be done with the vehicle radio. For Iltis, it is important that each vehicle has communications in the event that one radio is damaged then there is a back up.

Whether it is a dismounted or dismounted/mounted patrol, communications within the patrol and between the patrol and the Tactical Operations Centre is vital. To ensure that these communications are maintained and the location of the patrol is known, regular radio checks and "loc stats" are given every 30 minutes. Not only should this be done between the patrol and the Tactical Operations Centre, but also between the mounted and dismounted portion of a patrol.

Weapons and Ammunition

The minimum number and types of weapons and ammunition carried on a patrol does not change whether it is dismounted, mounted/dismounted, or mounted. The only difference will be that each vehicle will also have one M 72 SRAAW(L) for the mounted patrols. As a minimum, a section patrol will be armed as follows:

Minimum: one C9, one shotgun, one M203 and one C7.

The C8 (or variant) is the preferred personal weapon of each soldier for various reasons. The most obvious reason is that in an urban environment, where any combat will be close quarter and in buildings, a shorter weapon is essential. As well, since most patrols will involve vehicles to some degree, a shorter weapon is much easier to manipulate in such a confined space as the Iltis.

It is also advantageous that each soldier has a PAC 2/4 and Sure-Fire Light attachments to their personal weapon. These attachments have been found to be indispensable while patrolling through Kabul. In particular, the Sure-Fire Light is an excellent system for providing white light when required. It allows the soldier to leave behind their large, and not nearly as effective/bright bulky Mag Lite flashlight.

C7: ten 30 round magazines (on a mounted patrol the extra 5 magazines will be carried in the vehicle in a patrol pack. For dismounted patrols it is at the patrol commanders discretion whether or not each soldier will carry five or ten magazines. The patrol commanders battle procedure, will determine the amount of ammunition carried.).

C9: three boxes.

Shotgun: ten rounds to include five slug and five shot;

M 203: six rounds HE.

Other

Just like the weapons and ammunition, the remainder of the equipment carried by each soldier will not change. As stated before, the reason for this is that at any given time a patrol must be prepared to operate during the day or night and for 24 hrs. The last three items assist in making this a possibility.

NVG.

Water: min 5L of water per soldier.

Personal Protective Equipment: frag vest (with plates), tac vest, and helmet.

SUMMARY

The general principles of urban patrolling still apply in Kabul and are what each soldier and leader use as their basic guide. Like any environment, Kabul and the threats it presents have several unique aspects that have forced us to adjust some of what we already know about urban patrolling. Based on these unique factors, patrol commanders were able to refine the basic tenets of urban patrolling to suit this battle space. These lessons learned were derived through trial and error and were found to have worked best for our patrols. It must be stressed that the basic principles of operating in an urban environment do not change.

No single type of patrol can effectively accomplish all the tasks and missions that are assigned. It is best to have a combination of dismounted, dismounted/mounted, and mounted patrols in your patrol matrix in order to effectively accomplish the mission at hand. This is the only way to ensure complete coverage and dominance of the AO. Regardless of the type of patrol that is being conducted emphasis must be placed on proper battle procedure at all times.

Operations at night are a necessity to completely dominate the Area of operations. With the advances in technology and the night vision equipment that the soldiers carry, we have a definite advantage over the opposition military forces and it must be taken advantage of.

Battle procedure is an important step to every patrol. Most of the patrols that are conducted throughout the area of operations are deterrence/presence patrols and can become routine. Once the section has conducted several of these patrols, battle procedure can be streamlined, but there are certain steps that must be emphasized to guard against complacency. Emphasis must be placed on the issuing of detailed orders, equipment/vehicle maintenance and rehearsals. This helps to guard against complacency and reinforces the constant vigilance that patrols must maintain.

A patrol's posture is very important because this can affect the amount of information that a patrol can obtain from the locals. In order to obtain the maximum amount of information it is important that the locals do not fear us, so an unaggressive posture is best.

It is important that the patrol maintains an unaggressive posture throughout the patrol, unless required. This allows for a friendlier attitude between the patrol and the locals. This relationship must be fostered because they are our greatest source of information.

About the Author ...

Capt AJ Gimby is an infantry officer who deployed to Afghanistan as a member of the 3 RCR Bn Gp on Op ATHENA Roto 0. He is currently posted to the 1st Battalion Nova Scotia Highlanders (North) as the RSSO. He graduated from the University of Western Ontario in 1998 with a Bachelor of Arts — Political Science

RECCE LESSONS LEARNED IN AFGHANISTAN

Captain S. Trenholm

ISSUE

Since the arrival of Canadian soldiers to Kabul, there have been many challenges to overcome. The people, the climate, and the terrain were all seemingly minor issues that necessitated additional planning and created some consternation during Reconnaissance Platoon's (Recce Pl's) tenure in Afghanistan. Equipment limitations, medical, physical and logistical constraints all directly influenced by the environment in which reconnaissance missions were to be executed.

While deployed on Op ATHENA (ROTO 0), Recce Pl has conducted many challenging missions not least of which being observation and surveillance, close target reconnaissance (CTR), and patrolling (predominantly on foot) remote areas in the mountains surrounding Kabul. The execution of the afore said missions required much detailed planning, as many environmental factors needed to be taken into consideration. Rugged terrain, high altitude, safe routes / land mine free areas, and the lack of natural cover obligated leaders at all levels in the platoon to be extremely diligent in their planning for each operation.

The mountainous terrain not only posed mobility issues, but also compounded medical (specifically med evac), logistical (specifically re-supply), and communications concerns as well. Additionally, the high altitude of Kabul and its environs imposed further medical and physical constraints that, although overcome, should have been addressed prior to deployment. The jagged peaks and steep slopes proved to be impediments to any operation, but they paled in comparison to the inherent latent mine threat throughout the countryside. Non-registered minefields were discovered in areas where they were unexpected. As a result, combat engineer assets were utilized in an effort to increase the existing level of force protection.

As reconnaissance patrolmen, many missions demanded that the platoon embark on cross country patrols, inevitably leading up and over some very high peaks around Kabul. Problems and limitations with current-issue equipment quickly became evident, as the patrolmen conducted operations in terrain much different from Canada. High temperatures by day, rugged terrain and high altitude proved to be physically taxing on each soldier. Trudging up steep slopes, some taking 4-5 hours to climb, soldiers began to experience the effects of heat exhaustion and fatigue, as their equipment constricted ventilation and added excess weight to their already heavy loads. The relationship between the environment, perceived threats against ISAF, and the current issued equipment became important factors for consideration soon after arrival in theatre. In retrospect, however, many issues were addressed either prior to deployment or shortly thereafter, but many were not completely comprehended until the platoon began its operations in Kabul.

AIM

The aim of this paper is to discuss how mountainous terrain, coupled with the effects of high altitude, affect reconnaissance operations in and around the city of Kabul with a view to making recommendations on how to effectively prepare and employ a reconnaissance platoon in similar environments for future operations.

DISCUSSION

Upon receiving final confirmation of 3 RCR's impending deployment to Afghanistan, soldiers of the battalion group began preparations for deployment in earnest. As the condensed period of pre-deployment activities reached a fevered pitch, Recce Pl attempted to focus its efforts on specific training that would aid them in the accomplishfuture missions. Unfortunately, the short period for prescribed training and the necessary pre-deployment leave period limited the platoon at what it could focus upon for its own pre-deployment training. The resulting effect was that the platoon deployed without much of an opportunity to focus upon skills identified as being critical to success in an environment such as Afghanistan.

Courtesy of—Combat Caméra

Once deployment was complete, the platoon utilized the initial two-week period to acclimatize and become familiar with the area, as both were of vital importance. As the final flights began to arrive, the platoon was quickly deployed into the surrounding environs of Kabul in an effort to create a presence and further familiarize the soldiers with the terrain. During ROTO 0, Recce Pl was deployed on various missions ranging from observation / surveillance, patrolling unknown areas, monitoring and recording patterns of life, and close target reconnaissance. While being assigned tasks such as those previously mentioned, the platoon was also directed from time to time to provide personnel to be employed as counter-attack teams (CAT) while VIPs visited the ISAF area of operations (AOO). This would often create manpower issues and some missions would be downscaled as a result.

ADJUSTING TO THE PERCEIVED THREAT

As most missions involved conducting observation or presence patrolling, the perceived threat to any mission varied depending on the area in which the platoon was to operate. In response to this, steps were taken to balance the level of force protection with the perceived threat of each mission.

The threat against ISAF did not appear to be from armed personnel, but from forgotten landmines. During earlier missions, the perceived direct threat to the platoon was thought to be armed personnel, but as time passed it soon became evident that many people stayed away from the mountains. The people that were encountered in the mountains were predominantly goat herders and people collecting scrub brush for their fires. It was identified from the outset, however, that land mines were a definite latent threat whenever walking cross-country. As a result, authority was sought to allow the patrolmen to leave their frag vests in camp while deployed on operations in the mountains. The reason for this was two fold:

♦ The imminent threat to any patrol was not perceived as being from armed engagements with opposing military forces (OMF) personnel, but rather from land mines. Deduction - the threat came from beneath the soldier as opposed to the front, sides, or rear, and a frag vest

would offer only protection to those who would be standing in the immediate vicinity of the person who detonated the mine. Tactical spacing could potentially minimize the collateral damage to other members of the patrol.

♦ While carrying loads upwards of 120lbs on their backs, the patrolmen would be required to climb steep mountains (sometimes for hours on end) before a patrol base or an observation post (OP) was established. As the frag vest did not offer adequate ventilation, when one also considered its weight the risk of heat exhaustion and fatigue became a clear concern.

The decision was made to forego frag vests when operating cross-country solely based on the facts that the they offered minimal protection against anti-personnel land mines, their weight and minimal ventilation induced heat exhaustion, and after scaling rugged terrain with heavy rucksacks they needed to be able to effectively manoeuvre in the event of hostile fire. Additionally, if a member fell victim to heat exhaustion while on patrol in the mountains, it would be very difficult to arrange med evac until the member was extracted to the base of the mountain. The risk associated with wearing the frag vest while in the mountains far outweighed the risk of hostile engagements with OMF.

While deployed within the built-up areas of Kabul, the patrolmen would wear the frag vests as the likelihood of hostile fire and improvised explosive devices (IEDs) became more prevalent and rucksacks were shunned in favour of smaller patrol packs for shorter missions.

♦ In retrospect, the decision to forego frag vests during operations in the mountains greatly increased the overall effectiveness of the platoon. As the imminent threat to the patrolmen was not from hostile fire, but from latent land mines, the wearing of fragmentation vests proved to be more to the detriment of the platoon rather than to its benefit. Scaling mountains with 120 lbs on one's back is an arduous feat at best, especially with the additional weight of equipment that provides relatively minimal protection as compared to being without. The risk of exhaustion, in addition to the "threat from below" of land mines, were the mitigating factors when decided whether or not to wear frag vests while operating in the mountains. Conversely, while operating in urban areas, frag vests were worn as the threat form land mines diminished whereas the threat of hostile fire increased greatly.

FORCE EMPLOYMENT CONSIDERATIONS

Prior to deployment on Op ATHENA (ROTO 0), the total strength of Recce Pl was approximately half of what it was during the mission in Afghanistan. Once rumours of the impending deployment were confirmed, the platoon was bolstered to a total strength of 44 men all ranks. The additional manpower and unique organization of the platoon, greatly enhanced its versatility and enabled it to effectively complete multiple tasks and difficult missions.

In order to facilitate the execution of reconnaissance missions, the platoon was given additional soldiers to bolster its numbers from the garrison total of approximately 25 to an operational level of 44 men (inclusive of all ranks) - platoon HQ, 3 reconnaissance sections, and 1 sniper section. The foresight to provide the additional soldiers to Recce Pl greatly enhanced its ability to effectively accomplish all missions. Once the home leave travel assistance (HLTA) cycle commenced, at least 1/3 of the soldiers were away at any given time, and coupled with tasks (counter-attack team [CAT], close personal protection [CPP], TCPs) external to 3 RCR, manpower constraints soon became apparent. Without the larger organization, the overall effectiveness and employability of the platoon would have been greatly reduced.

As most missions involved either observation tasks or presence patrolling, the employment of each section varied with each operation. As with any mission, the terrain dictates many things, not least of which being the execution of the mission. In order to effectively monitor and record patterns of life, it was often required that the platoon deployed each section to different locations to view separate objectives as opposed to operating as one element together. The jagged peaks and deep valleys provided excellent positions for observation, and through proper dispersal of the sections, more terrain could be observed.

The unique organization of Recce Pl can be misleading. Even though the platoon is organized as being 3 recce sections and 1 sniper section, it should be noted that the sniper section is essentially attached to Recce Pl for administrative purposes. The unit master sniper, also the sniper section commander, reports directly to the CO on any sniper related matter. In the event that there are no ongoing sniper tasks, the sniper section is used to conduct observation tasks in support of reconnaissance missions. This helped mitigate the decrease in manning levels due to HLTA and camp standing tasks.

The additional men allocated to Recce Plat greatly enhanced its ability to complete many different tasks while remaining versatile at all times. As tasks and HLTA began to diminish the amount of soldiers with which to operate, the additional numbers proved valuable. When tasks had arisen in support of elements extraneous to 3 RCR, 1/3 of the platoon would be designated to fulfill this tasking. When coupled with the effects of HLTA (equivalent of 1 section at any time) and camp security tasks (1/2 section), the platoon is inevitably rendered incapable of mounting anything larger than a section-sized operation. In response to this, it is recommended CAT and quick reaction force (QRF) tasks in support of VIP visits be designated as a platoon operation as opposed to section. This will enable the platoon to maintain cohesion and concentrate its efforts on one task, while HLTA and camp security is in full swing. Once HLTA is complete, manning levels will be sufficient to handle multiple tasks.

ENVIRONMENTAL EFFECTS UPON MOBILITY AND FORCE PROTECTION

The environment, as well as the perceived threat against ISAF, greatly affected mobility and presented new concerns towards reconnaissance operations. The rugged terrain, mine threat, and lack of natural cover imposed great restrictions upon how the platoon was to operate.

As has been previously alluded to, there are many perceived direct and indirect threats to the soldiers serving in Afghanistan. While the perceived direct threat is believed to be IEDs and other acts of terrorism, the indirect threat that land mines pose is of much greater concern to the members of Recce Pl. The mountains in and around Kabul are littered with land mines, a result of the many years of conflict that has ravaged Afghanistan. While the mountains provide excellent positions for observation into the villages, they also provide excellent routes for smuggling and are ideal locations for launching rockets against targets within the city of Kabul. As a result, the majority of the platoon's operations were conducted in the mountains, in search of rocket launch sites, detection of smuggling activities and routes, and to conduct observation missions. However, the threat of land mines, coupled with the rugged terrain the soldiers would have to climb, provided additional challenges.

To provide an added measure of security, a combat engineer section was attached to the platoon for operations in the mountains. The engineers provided mine clearance capabilities to the

operations, as the soldiers crossed terrain that was littered with land mines and unexploded explosive ordnance (UXO). This was a vital consideration, as each area the platoon operated in was deemed as being high risk for threat of land mines. Without the engineer support, casualties could have been sustained. In the planning of routes, the threat of land mines became a mitigating factor. River and streambeds, or waatis, would have been the preferred method to scale the steep slopes to reach positions in the mountains, however, old mines and UXO collect near the waatis with each rain and the spring run off. Chosen routes then became increasingly more demanding as the more difficult slopes were felt to be the safest. The main indication of a possible mine free area, however, was animal dung. If signs of animal dung could be seen, it was generally believed that the area was relatively mine free, and as the soldiers trudged up mountainsides, they would conduct level one ground clearances of the intended route in front of them. This greatly improved the sense of security while walking a high-risk area, however, it detracted from their ability to consistently observe their arcs and watch for other people. This was a risk that had to be accepted, as walking up hill while searching for land mines was unavoidable in this environment. This also led to instances of unexpected contact with herders and locals collecting brush for fires, which compromised the mission if it was covert.

The main indication of a possible mine free area, however, was animal dung

The many peaks, ravines, and valleys, also made it very difficult to remain undetected, and the minimal natural cover proved to be major limitation. With heating and cooking fuel being difficult to find, many people would climb the mountainsides in search of scrub brush. As a result, on many occasions the platoon would encounter goat herders and people looking for fire fuel at elevations that one would not expect at all. On the mountains that would take 3-4 hours to scale, we would commonly see goats and herders on their summits. With this in mind, it is easy to comprehend how a patrol could become compromised without warning.

When planning reconnaissance operations, the environment in which the mission is to be executed must always be considered. The rugged and harsh surroundings near Kabul provide much substantiation for this claim. During Aug 03, when Recce Pl began conducting its initial operations, the soldiers had yet to acclimatize completely to the new environment—especially the heat and altitude of Kabul in the summer. Large amounts of water had to be carried as daytime temperatures climbed to near 40 Celsius and dropped by nearly 20 degrees at night, even more so at greater elevations. Moving through mountainous terrain in hot, dry climates requires much hydration, which results in added weight to be carried as re-supply was a difficult issue to solve. In order to alleviate the hydration and re-supply issues, each soldier had to carry enough water to last the duration of the mission—usually eight to ten 1.5 L bottles per soldier.

High altitude also became a concern once deployed to Afghanistan as well. The peaks above Kabul rise almost 3000 metres above sea level and, when not sufficiently acclimatized, high altitude can have a dramatic effect upon the overall effectiveness of any person. On several occasions, members of the platoon began to feel the effects of high altitude (early onset of fatigue, shortness of breath, headaches) while on patrols. Although these symptoms are similar to dehydration and exhaustion, the lower levels of oxygen had a clear effect upon the patrolmen.

Airlift limitations placed many restrictions upon the planning of each operation. Land mines and altitude were mitigating factors for each request. In order to secure airlift for any mission, the

intended landing zone (LZ) had to be secured and certified as being free of mines and UXO. This was obviously a problem, as recce missions mean that the platoon is inserted prior to other forces arriving. As a result, insertions, extractions, and re-supply were conducted by vehicle. With minimal cleared routes through the mountains, and being ever dependent upon German forces for air support, missions become greatly dependent upon one method of insertion and extraction, leaving few options for contingency planning.

It is evident that rugged terrain greatly affects mobility and creates new concerns for the execution of reconnaissance tasks. However, when the threat of land mines becomes part of the equation, the concerns are compounded. In an effort to alleviate some of the mobility and mine concerns, the platoon employed combat engineers and whenever possible stayed near areas known for animal grazing. Route selection and intended OP / patrol base locations could not be confirmed until the deployment was complete and the mission well underway. Flexibility became a key requirement in the accomplishment of the mission as routes, LZ selection, and the effects of the high altitude environment had to be considered.

COMMUNICATIONS CONSIDERATIONS

High altitude locations usually facilitate communications, as transmissions can be sent over impeding terrain features, but as many peaks around Kabul climb above 10,000 feet, communications easily become problematic.

Each operation experienced communications difficulties, as the patrols climbed and descended terrain features. In an effort to alleviate this concern, each patrol was equipped with Sat phones, with the intent to utilize these in the event of total communications failure. Communications windows needed to be established for the following reasons:

- conserve battery power and minimize transmission signals;
- enable patrols to re-locate from communications dead zones to a higher and more suitable location, thus allowing the patrols to investigate low areas without concern of being considered in trouble; and
- facilitate freedom of movement while on patrol.

In the event that communications were not established within the designated windows, a QRF would be deployed to investigate and extract the patrolmen, if necessary. The Sat phone was not utilized as the primary method of communication, as the battery power was insufficient to run continuously and it was a non-secure means of communications. The 522 radio was used as the primary method of communication for the platoon while deployed on missions. This radio provided reliable encrypted communications, but its weight was a major drawback, as it was far too heavy for dismounted operations. Additionally, the PRR system was ideal for intra-platoon communications, as they were reliable, durable, and lightweight.

The utilization of Sat phones undoubtedly enhanced the platoon's ability to communicate effectively. The multiple methods of communication enabled the platoon to negotiate the terrain that would have otherwise been comms dead zones. Sat phones should undoubtedly be used as communications fail safe on all missions outside of built up areas.

EQUIPMENT CONSIDERATIONS

The rugged terrain presents new concerns in terms of observation, requisite training, and issued personal equipment. As the mountains provided excellent vantage points for observation, they also necessitated that some training/medical and equipment requirements be addressed.

Observation was less difficult from higher locations but, in order to evade detection, many OPs were established at too great a range from the target to obtain detailed information. The equipment used by the patrols, however, was very light and efficient. The Sophie hand held thermal imager proved to be an extremely reliable piece of equipment, as did the PVS-14 and Vector IV binoculars. The PVS-14 provided a very light weight night vision capability, and was less intrusive (in terms of situational awareness) as it enables the user to keep one eye "free" for operation of their weapon. Partial depth perception is maintained as well. The Vector IV binos enable the user to effectively and accurately observe and determine the range to target with its laser range finder. These pieces of observation equipment greatly enhanced the soldiers' abilities to operate, as they were lightweight, durable, and effective-perfect for dismounted operations in a mountainous environment.

As the nature of the platoon's missions required that they be conducted outside of the built-up areas, there was an inherent need for advanced medical support, as basic first aid was deemed inadequate, due to our isolation during missions. As a result, an MA or PA (high altitude sickness qualified) was attached to the platoon for each mission. The possibility of severe injury (land mines, broken limbs from falls, etc.) was greater than most other organizations within the battalion group, strictly due to the nature of the operations. If a severe injury did occur, basic first aid was likely insufficient to stabilize the injury until med evac arrived. Members of the platoon were also trained in tactical combat casualty care and basic trauma life saving in order to provide added medical support in the event of a serious injury.

The current issue rucksack is unsuitable for heavy loads over mountainous terrain

Upon reflection of past missions, some critical preparatory training should occur. A basic mountain operations course provides a soldier with the skills that could prove beneficial in this environment. Skills such as knot tying, casualty rescue and lowering, and basic climbing techniques, would be an asset to any soldier having to operate in the mountains. As Afghanistan is one of the world's most heavily mined countries, extensive knowledge about mines and mine awareness training is critical to the safety of the soldiers. Additionally, an advanced level of first aid training is required as it could take quite awhile before additional medical assistance arrived in the event of an injury.

After having executed several missions during Op ATHENA (ROTO 0), many equipment issues have come to the forefront. The current issue rucksack is unsuitable for heavy loads over mountainous terrain. It does not evenly distribute the load on the carrier's body thus creating extra stress on the individual. The unbalanced load can result in the load bearer becoming unbalanced, which could prove to be extremely dangerous on a mountainside. Similarly, the current issue desert boots or combat boots do not provide enough support or traction for the soldier while walking on steep slopes carrying heavy weight. Without proper mountain boots, soldiers have sustained sprained ankles, bruised feet, and have fallen because their footwear was inadequate for the environment. Proper footwear and rucksacks are the largest concerns since commencing operations in Afghanistan. With new equipment arriving regularly, it is conceivable that this issue will be rectified in the near future.

The lack of similar terrain in the vicinity of Petawawa not only hindered the platoon's preparatory training, but members of the platoon had minimal comprehension of the type of environment in which they were about to operate for six months. The current observation equipment used by the patrolmen is excellent and highly valuable in the Afghanistan environment. However, the inherent need for additional mission specific training and improved individual equipment becomes evident as operations are conducted in and around Kabul.

LESSONS LEARNED

When considering the many lessons learned during Op ATHENA (ROTO 0), many recommendations can be made. The following pertains to issues for which there has yet to be a solution:

♦ **Equipment**. Although new equipment arrives regularly, the current footwear and rucksack are inadequate for the terrain in Afghanistan. As a large percentage of the country is mountainous, soldiers should be issued good quality mountaineering boots. These provide more stability and better traction on steep slopes, thus minimizing the risk of sprained ankles, bruised feet, and loss of balance (which could result in serious injury and affect the operation). Similarly, mountaineering rucksacks with internal frames help at providing even load dispersal and assist the soldier at maintaining their balance on steep slopes. The CF is currently working at creating an improved rucksack, however, issue is not expected to occur until 2005. As mentioned previously, the current communications equipment, although reliable, is too heavy and cumbersome for dismounted operations. A lightweight radio with the same capabilities as the 522 would be an excellent solution.

♦ **Mobility**. The lack of air support poses great problems as all insertions / extractions and re-supply need to occur by vehicle. Missions have very limited contingency planning, as air assets are undependable. Canadian helicopters are not powerful enough to be employed in the environment, thus we are limited to the minimal amount of German air support. The CF is in need of a large multi-purpose helicopter such as a Sea Stallion or a Blackhawk. This would negate any dependency upon other forces and their inability to commit support to operations.

♦ Pre-deployment training was insufficient for the nature of operations in Afghanistan. Efforts should be made to enable the soldiers to train in similar terrain (e.g., the Rocky Mountains) prior to deployment. This would provide them with a better appreciation of how to conduct operations in mountainous environments and many considerations could be experimented with prior to arriving in theatre. More specialized mine training and advanced first aid training is critical. Operating in remote locations without adequate first aid training is dangerous in itself. Train as you would fight and you will fight as you had trained.

♦ Force structuring should reflect the nature of the operations conducted. As the threat from land mines is considered to be high, engineer and medical assets should be attached to the platoon during every mission-permanently if at all possible.

About the Author ...

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OP ATHENA ROTO 0-EMBEDDED MEDIA

Major J. Janzen

ISSUE

Embedding media in front line units on military operations has long been a contentious subject with both journalists and soldiers alike. This debate has received considerable attention in recent months due to the widespread coverage of military operations in both Iraq and Afghanistan. Operation ATHENA was no exception; deployed Canadian troops faced intense and sustained media coverage throughout the mission. Reporters continue to demand increased access to operational theatres while senior commanders struggle with the problem of how to control and influence the mass media to their best advantage. The search for a happy medium continues on both fronts.

AIM

This paper will provide the reader with some insights into media relations practices employed by the 3 RCR Battalion Group during Rotation Zero (ROTO 0) of Op ATHENA and to make a few general recommendations at the tactical level for future missions.

DISCUSSION

The term “embedded media” was brought into popular usage with the commencement of the War in Iraq in early 2003. While both journalists and the U.S. military claim the embedding process was successful, it was not without controversy. Points of contention included the selection process for embedded positions, the lack of positions available with front line units, and the expulsion of several high-profile journalists due to operational security violations. As the Canadian military began planning for its year-long mission to Afghanistan, the debate surrounding the embedding of media into operations was at a crux. It should be noted that Canadian military commanders had 'hosted' media on several previous operations and were quite open to doing so again in Afghanistan. Due to the emerging controversy on embedding and the trend towards increased levels of access to both soldiers and sensitive information, however, the Deputy Chief of the Defence Staff (DCDS) and Assistant Deputy Minister (Public Affairs) (ADM[PA]) staffs spent considerable effort considering how the media would be managed onOp ATHENA. Formal directives and ground rules governing the embedding process were established in the summer of 2003, using the American ground rules and procedures as a guide. These documents provided an excellent starting point for the integration of journalists into the 3 RCR Battalion Group. It quickly became apparent, however, that there were fundamental differences between how the media was managed in Iraq and the reality on the ground in Kabul.

The American concept of embedding and the resulting ground rules were specifically tailored for wartime operations. In the Iraq War, media representatives were assigned to specific sub-units for the duration of the conflict. These units did not remain in fixed locations for extended periods of time, rather they moved rapidly as the coalition advanced towards Baghdad and other strategic objectives. Journalists slept, ate and travelled with members of the same unit for

several months. Once the initial registration and accreditation period was over, media correspondents had almost no contact with public affairs officers or senior commanders. They were administered and briefed by platoon or company commanders in the field with limited public affairs experience. As a result, there were few opportunities to brief or influence the media from the strategic level and few checks and balances other than the stringent ground rules established prior to deployment. During Op ATHENA, however, all journalists were centrally located at Camp Julien and had separate living quarters from the troops. Media members had almost daily contact with public affairs officers and regular contact with senior commanders. As a result, journalists were within arms length for virtually the entire operation. The stark differences in the media relations environment between Operation IRAQI FREEDOM and Op ATHENA are illustrated in Table 1-1.

Operation IRAQI FREEDOM (War)Embedded Media	Operation ATHENA (Peace Support)Embedded Media
Minimal contact with public affairs officers	Daily contact with public affairs officers
Minimal contact with senior commanders	Regular contact with senior commanders
Few opportunities to influence media	Many opportunities to influence media
Media has less awareness of big picture	Media has greater awareness of big picture

Table 1-1

The Canadian management of the handling of embedded media in Kabul differed from reference US directives and ground rules employed in the recent war in Iraq because of the static, base centric nature of a peace support operation compared with manoeuvre war fighting.

These key differences provide the basis for the following discussions on best practices for embedded media relations, media access to operations and media access to sensitive information. As it is likely that the majority of future missions involving the Canadian Forces will be operations other than war, it is believed that the resulting deductions and recommendations should continue to be applicable on follow-on deployments.

MILITARY COMMANDERS AND EMBEDDED JOURNALISTS

During ROTO 0 of Op ATHENA, several best practices for military commanders dealing with media members in an embedded context were identified. Ultimately, the relationship between the military and the media is not unlike any interpersonal relationship. Keys to success include mutual respect, open communication and the establishment of common ground when disagreements occur.

The relationship between the military and media is not unlike any interpersonal relationship. Keys to success include mutual respect, open communication and the establishment of common ground rules when disagreements occur.

One of the main reasons the embedding process was successful on ROTO 0 of Op ATHENA was that the senior members of the chain of command recognised and employed these

principles from the beginning of the mission. Before deploying, the chain of command made it clear to all ranks that the media dimension was important to the overall success of the operation. This example was set early in the tour. When journalists arrived at the camp, they were quickly introduced to key commanders on the ground. Senior officers were able to immediately establish a rapport by assuring journalists that they were welcome and would be supported. Quite often interviews were granted on the spot, which clearly demonstrated to the media that they would have access to key personnel during their time with the Canadian Forces. This immediately set reporters at ease and laid the foundations for a professional relationship.

Efforts and direction by the chain of command to welcome the media, to build positive interpersonal relationships and to support them for common benefit, was one of the main reasons for success in the embedding process.

Another extremely effective media relation's tactic employed by commanders was to be proactive when dealing with journalists. On many occasions, senior officers would join members of the media for meals or a cup of coffee. These impromptu gatherings suggested to journalists that they were not regarded as an inconvenience or something to be avoided. Further, it gave both parties an opportunity to hold informal discussions that would often lead to positive story ideas being passed to journalists. Many company commanders also sought out journalists when their troops were about to embark on interesting or important missions. Reporters appreciated being given information on upcoming activities rather than having to discover it on their own. By pushing information to the media, the battalion was also able to exercise some influence over what journalists decided to cover. When an opportunity to cover a mission or event was proactively presented to a reporter, it almost always received coverage.

By interacting regularly with the media and through pushing information in a positive, proactive manner that included them prior to events the chain of command developed extremely effective media relations.

Interactions with journalists who remained in theatre for extended periods tended to be more positive than with those that only stayed for a short period of time. In addition, working relationships were far more cordial with journalists that were embedded on the camp as opposed to those who chose not to be embedded. Coverage provided by long-term embedded media tended to be more accurate than that provided by journalists who only stayed for short periods or chose to live off camp. When disagreements between military members and journalists arose, they tended to be easily resolved when dealing with embedded members. On several occasions reporters and senior commanders were able to meet and resolve difficult problems to everyone's satisfaction. When dealing with non-embedded media however, disputes were often difficult to resolve. Non-embedded journalists would often leave the camp prior to the resolution of the difficulty and return upset days later. Success in later resolving these disagreements was limited. It must be noted that respect is a two-way street and on occasion some members of the media made comments that were quite offensive to military members. There were periods of tension during the deployment, including with embedded media members, but the overall experience was overwhelmingly positive. It is quite clear that respecting the media and establishing a rapport with them greatly enhances the effectiveness of media relations.

The development of rapport and shared experience resulted in better media relations existing between the military and their embedded media than the military and non-embedded journalists.

From a media relations standpoint, it was very beneficial to have journalists embedded with Canadian troops. In peace support operations where senior commanders and public affairs officers are co-located with the media, solid relationships can be built that greatly facilitate the media being properly informed. This also allows opportunities to influence journalists and resolve any difficulties that may arise. Specific recommendations include:

- senior commanders should personally welcome embedded media and assure them of a high level of support;
- commanders should proactively pursue professional relationships with embedded journalists and inform them of potential media opportunities; and
- embedded positions should be given to journalists who are willing to cover the operation for extended periods of time.

FACILITATING ACCESS TO MILITARY OPERATIONS FOR EMBEDDED MEDIA

One of the most difficult challenges faced by military commanders in the embedding process is how to give the media the access they need to accurately cover the mission without jeopardising or interfering with military operations. During Op IRAQI FREEDOM, many journalists complained about the lack of access to the front lines. Only a select few reporters were able to cover combat units while most were situated far from the front lines.

It is not always possible to give competing journalists access to the coverage they want for because sub-unit availability may be exceeded by interested media representation. However, you need to keep all journalists content without disrupting the conduct of operations.

Due to the fundamental differences between the missions outlined earlier in this paper, this problem was easily avoided on ROTO 0 of Op ATHENA. Media interest was at its peak during late August and early September 2003. At that time, eight journalists representing five different agencies were embedded. All of the journalists wanted to be placed with rifle companies, of which there were only three. Embedding more than one agency per company was not an option, as the level of disruption to operations would be unacceptable. As a result, a decision was made not to permanently embed journalists into companies for extended periods of time. Doing so would result in the journalists who were paired with rifle companies being happy and the rest being dissatisfied. It was clear that media would have to rotate units on a regular basis to give everyone the opportunity to cover front line troops. The drawback to rotating reporters was that it would make it more difficult to establish solid relationships between media and sub-unit members. As a result, a schedule was devised that allowed journalists to cover two sub-units, one rifle company and one other organization. A reporter was assigned to the first sub-unit on week one and the second sub-unit on week two. On the third week, the reporter would return to the sub-unit that was covered on week one, allowing for some familiarity and relationships to be established between units and journalists. Table 2-1 is a sample schedule that illustrates the arrangement that was used by 3 RCR Battalion Group.

SUB-UNIT	WEEK 1	WEEK 2	WEEK 3
Parachute Company	Journalist A	Journalist B	Journalist A
Quebec Company	Journalist B	Journalist A	Journalist B
Charles Company	Journalist C	Journalist D	Journalist C
CIMIC Cell	Journalist D	Journalist C	Journalist D
November Company	Journalist E	Journalist F	Journalist E
24 Field Squadron	Journalist F	Journalist E	Journalist F

Table 2-1

Flexibility was also built into the embedded schedule to accommodate special requests made by the media. On occasion, journalists were allowed to swap units or cover sub-units outside the ones assigned to them. Each request was dealt with on a case-by-case basis. Overall, the journalists were very happy with the embedding rotation as it allowed them to cover a broad range of activities and people. The battalion group was also satisfied, as there was a degree of control placed on the media and minimum interference to operations as only one journalist was embedded in a sub-unit at any given time.

Equal access for the media is critical to maintaining harmony. Though this detracts from the embedding concept—the rotation of various journalists through a sub-unit—some repetition will permit relations to build and flexibility will cater for unforeseen requirements.

Another challenge that the 3 RCR Battalion Group faced in facilitating access to operations was the provision of transportation, particularly on Iltis patrols. Theatre regulations mandated that three out of the four available seats in each Iltis be crewed by military members. The remaining seats were often required to transport medics and interpreters, which were also vital to the mission. A number of solutions were employed to allow members of the media to accompany Canadian troops on patrol. When spare vehicles and crews were available, a third Iltis was deployed to accommodate the media. From a security standpoint, this was the preferred option. Given the high tempo of operations however, spare vehicles and troops were rarely available. Fortunately, journalists had been warned prior to joining the battalion group that media transportation was provided only on an "as-available" basis. As a result, many members of the media hired their own vehicles and drivers to transport them on occasions when military transport was not available. This was accepted as long as advance notice was given to the patrol commander so that he could make the necessary tactical adjustments. The media that decided to hire private transportation seemed to favour this method of operation. Most continued to use their own vehicles, even when space was available via military means. Journalists from smaller agencies, however, could not afford to hire drivers on a regular basis. In these cases, the reporters were simply directed to patrols where space was available. The sub-units were extremely resourceful in finding ways to allow the media to cover their activities. Embedded journalists recognised that soldiers were going the extra mile to assist them, which further strengthened the bonds that were developing between reporters and assigned units.

The tactical transportation of the media can be a challenge. Advertise the fact that transport is available only if tactically feasible. The inclusion of a privately hired vehicle for the media representing more affluent agencies should be permitted (and catered

for in operational/security planning). Extra efforts to accommodate journalists from smaller agencies in military transport will be appreciated and further strengthen relations.

Giving equal access to all members of the embedded media greatly enhanced the media-military relationship. Planning and administrative effort was required to devise a system that would allow journalists to see a variety of different operations while still maintaining a level of consistency that would allow a degree of trust to develop between reporters and soldiers. Sub-units were able to overcome transportation limitations to ensure reporters had every opportunity to cover ongoing military operations. Specific recommendations pertaining to media access include:

- establish a schedule that allows all journalists to cover front line units;
- ensure rotations are long enough so that an affiliation can be built between journalists and particular sub-units;
- build flexibility into the rotation plan to allow for unforeseen changes and requests;
- inform prospective embedded media up front that transport is provided only on an as available basis; and
- allow journalists to utilize private means of transportation if tactically feasible.

MEDIA ACCESS TO SENSITIVE INFORMATION

The most contentious issue when dealing with military-media relations is the level of exposure to sensitive information and operations that should be afforded to journalists. During ROTO 0 of Op ATHENA, members of the media had a moderate level of access to operational information. They were often briefed on upcoming operations and exposed to sensitive material to help them better understand and communicate to Canadians the overall mission being conducted by our forces in Kabul. To ensure that classified information was not released in news reports, members of the media were subject to a ground rules agreement, including a list of releasable and non-releasable information. These documents were quite generic in nature, and were seen as overly restrictive and confusing by members of the media. For example, the guideline for non-releasable information on deployed equipment and personnel was worded as follows: "Specific information on troop strength, equipment or critical supplies (e.g. artillery, tanks, landing craft, radars, trucks, water, etc.)." The media was uncertain as to whether they could even mention simple information such as the name of a vehicle or an approximate number of how many soldiers were in the 3 RCR Battalion Group. Many of these concerns were alleviated by the production of theatre specific ground rules, as well as comprehensive briefings to better define the boundaries between releasable and non-releasable information.

The issue of sensitive information is confusing and at times contentious among the media.

Canadian journalists covering ROTO 0 of Op ATHENA filed several hundred individual news reports. Of all these reports, only a handful inadvertently released information that was deemed inappropriate by military operators. In all cases, the infractions were minor in nature and there was no significant impact on operations. Most of the incidents were easily resolved by pointing out the infraction to the journalist and discussing measures to ensure errors were not repeated. In one case, a reporter did release sensitive information on multiple occasions.

The task force commander successfully resolved the problem by personally warning the journalist about the potential implications of his actions. Overall, the reporters proved to be quite trustworthy regarding matters of operational security. They recognised the need and rationale for restricting the release of certain information and were quite conscientious in their efforts to ensure they adhered to regulations.

Journalists need to be educated early as to what specifically constitutes sensitive information, which they can't report, and why. If properly educated, the majority of reporters will not compromise security through the release of sensitive material. Appropriate corrective action for those who violate regulations concerning the release of such information must be immediate.

Tensions surrounding the release of sensitive information became much more pronounced during crisis events such as rocket attack warnings and the mine strike incident. During these events, members of the media became quite vocal and impatient with their demands for access, while military commanders tended to be more cautious in terms of what could be released. In some cases, journalists would leave their assigned protected areas during periods of alert in search of information or imagery for their stories. The only way to contain the media under these circumstances was to place them under the escort of a public affairs officer and keep them as updated as the situation evolved. Even when communication with Canadian media outlets were restricted, it was important to provide ongoing information to embedded reporters.

Cut off from information, especially during an obvious emergency, journalists will actively seek information.

Media members wanted to begin working on their stories as soon as possible to enable them to file as soon as the blackout was lifted. During the mine strike, efforts were made to regularly brief the media on events as they unfolded. The task force commander made himself available the same evening of the event and access was given to officer commanding parachute company the following day. The embedded media recognised that they were being kept informed and as a result were quite easy to deal with in the days following this tragic event. They were reasonably patient and understanding even when told they would not have access to the destroyed vehicle and would have to wait several days to interview members injured in the incident. As long as open and honest lines of communication were in place, journalists were normally quite cooperative, even in crisis situations.

By maintaining open lines of communication and making themselves available for comment during even the most challenging times military leadership was able to maintain the patient cooperation of the media.

On a few occasions, planning was conducted for highly sensitive operations such as the potential arrest of terrorists operating in the Afghan capital or contingency plans for the defence of the Afghan government. Journalists (as well as military members not directly involved) were generally not privy to these plans as the risks associated with security breaches were extreme. There is a downside to not allowing at least some media involvement in these types of operations. Canadians can be left with the impression that the Canadian Forces are involved in a soft peacekeeping mission, when in fact troops are being deployed on some dangerous and sensitive missions. The difficulty lies in allowing members of the media to cover at least some aspects of these missions while ensuring that a high level of operational security is maintained.

It is difficult to make the media privy to close hold operations during planning just as the majority of the troops are not informed for operations security (OPSEC) reasons.

The media and public affairs concern is that Canadians are left with the impression that the Canadian Forces are involved in a soft peacekeeping mission when that is not the case.

In cases like this, a member of the media may agree to extreme security measures in order to be able to cover a highly sensitive mission. For example, a journalist could be required to sign an agreement indicating that material will not be released before a certain date and that selected aspects of the operation will not be reported on. Agreements would have to be signed up-front, prior to the release of significant information to ensure operational security. It is likely that some media would refuse to enter into such agreements, while others would be willing to commit. It would be important to remind reporters of the potential ramifications of violating operational security, particularly in the case of highly sensitive operations. Ultimately, the decision to involve media in classified operations must be made by military commanders on a case-by-case basis and operational security must always be of paramount concern. In some cases it may be possible however, to establish an arrangement that would make it feasible for a journalist to cover sensitive operations. Doing so would further raise the profile of the important work being done by Canadian soldiers on peace support operations.

Should OPSEC be compromised to advertise the fact that Canadian Soldiers are involved in highly sensitive direct action operations?

Access to sensitive information will always be a contentious issue in media-military relations. The keys to success include clearly defined boundaries and ongoing communications between both sides, particularly in times of crisis. Specific recommendations include:

- theatre specific ground rules and briefings should be created to ensure embedded journalists are clear on what information is releasable and what is non-releasable;
- if sensitive information is released, journalists should be dealt with promptly and appropriately;
- during alert periods, the media should be briefed on a regular basis and escorted by a public affairs officer if the situation dictates; and
- access to highly sensitive operations will normally be restricted, but should be considered when appropriate so that the full spectrum of missions being conducted is communicated to Canadians.

LESSONS LEARNED

Canadian troops deployed on Op ATHENA were the subject of prolonged and intense media exposure throughout the deployment. The coverage was overwhelmingly positive in nature and brought a great deal of credit to the task force and the Canadian Forces as a whole. Embedded media played a key role in telling the many stories of Canadian troops deployed in Afghanistan. The embedding program was successful largely because of the outstanding commitment of the chain of command at all levels to support journalists in their efforts to cover the operation. The difficulties experienced on Op IRAQI FREEDOM were not experienced on Op ATHENA due to the fact that the media was co-located with the chain of command. Commanders welcomed journalists with open arms and communicated respect for the media and their role in military operations. Reporters were given considerable access to both operations and sensitive information, which allowed them to understand and communicate the importance of the mission to the general public. Open communications and the solid relationships that were established between commanders and journalists allowed disagreements to be quickly resolved. Overall, the embedded media program was a resounding success.

RECOMMENDATIONS

- embedded journalists should be a part of future peace support operations;
- senior commanders should continue their strong support of the embedded media program;
- a proactive approach should be taken on building relationships with journalists;
- preference should be given to journalists willing to cover operations for a long period of time;
- a flexible embedding program should be established that enables all journalists to cover both front line and support units while ensuring enough consistency so that solid affiliations can be built;
- a clear policy on military transportation and media members should be clearly communicated to journalists prior to deployment;
- theatre specific ground rules regarding the release of sensitive information should be established and clearly communicated to embedded journalists; and
- care must be taken when allowing media access to sensitive operations or information but exposure to this material should not be rejected out of hand.

> *[Editorial Note: Classified information/intelligence cannot be downgraded except by the concurrence of the individual who classified the material in the first instance. Classified material cannot be provided to persons who do not hold the proper security classification. Ergo, unless the media representative is holding the appropriate clearance, he/she cannot be provided classified ("sensitive") information. Any release of information contrary to these regulations is a breach of security—an OPSEC violation—and is consequently a breach of service discipline. Therefore, any suggestion that the media should be provided access is not supported by regulations.]*

Overall, the practice of embedding media on Op ATHENA was extremely positive. Embedded media were instrumental in communicating the many stories of Canadian troops deployed in Afghanistan. The embedding program was successful largely because of the outstanding commitment of the chain of command at all levels to support journalists in their efforts to cover the operation. There were periods of tension during the deployment, including with embedded media members, but the overall experience was overwhelmingly positive. It is quite clear that respecting the media and establishing a rapport with them greatly enhances the effectiveness of media relations. It is highly recommended that the practice of embedding media continue on future operations.

About the Author ...

Major Jay Janzen joined the Reserves in 1989 and subsequently enrolled in the Regular Force in 1990. He graduated from RRMC in 1994 and served with the Lord Strathcona's Horse (Royal Canadians) as a troop leader in Bosnia and Canada. He also commanded the Strathcona Musical Ride and completed a tour as an RSS Officer. In 1999 he voluntarily transferred to the Public Affairs Branch and following his training was posted to the Land Staff. He has just completed a six-month tour in Afghanistan as the public affairs officer for the 3 RCR Battalion Group and is moving to Halifax as the Area PAO for Land Force Atlantic Area.

"MINE STRIKE—MINE STRIKE—MINE STRIKE" COUNTERMINE OPERATIONS IN THE JOWZ VALLEY, AFGHANISTAN

Major K. A. Cameron, CD

ISSUE

The battlefield that is Kabul has been the scene of 25 years of conflict between the Russians and the mujahideen, between the mujahideen militias themselves, and between the Taliban and the United States Airforce. The obvious results are widespread building damage, countless casualties and a significant amount of explosive ordnance contamination in the entire Kabul area. This includes mines, booby-traps, and unexploded ordnance (UXO). Additionally, the opposing military forces (OMF) of today, who may be Al Qaeda, Taliban or Hezb-e-Islami Gulbuddin (HiG) terrorist elements, target International Security Assistance Force (ISAF) personnel and installations through placement of mines and booby-traps or use of improvised explosive devices.

With the exception of booby traps, over the course of Op ATHENA Roto 0 from August 2003 to February 2004, 3rd Battalion Group The Royal Canadian Regiment (3 RCR Bn Gp) has encountered significant amounts of explosive ordnance on a daily basis. The responsibility of countering this threat falls on the close support engineers of 24 Field Squadron (24 Fd Sqn), 2 Combat Engineer Regiment. Examined in this article in particular is the conduct of the countermine task. The task is a challenging one of locating, identifying and removing this hazard, as well as preventing re-laying in areas previously deemed safe.

The conduct of operations in the Jowz Valley to the immediate southwest of Camp Julien over the September to December 2003 timeframe covers the complete spectrum of countermine operations, illustrative of the challenges, dangers and successes encountered. Given the casualties sustained during a mine strike in this valley in October 2003, this is obviously an emotional subject for all concerned—and yet, especially in the face of tragedy, it is essential to draw the lessons out of this hard experience. The perspective of this article is from that of the officer commanding 24 Field Squadron. The version of facts and conclusions drawn are in advance of the official release of the formal board of inquiry and the conclusion of the military police investigation, and draw only upon the experiences of the sappers involved. Yet, even from this limited perspective, it is felt that the Jowz Valley provides valuable case study lessons in countermine operations, applicable to the wider military engineering and army community. This article is written in the spirit encapsulated in Rudyard Kipling's poem, "Hymn of the Breaking Strain," a familiar one to most degree-trained engineers:

The careful text-books measure (Let all who build beware!)
The load, the shock, the pressure, material can bear.
So, when the buckled girder lets down the grinding span,
The blame of loss, or murder, is laid upon the man.
Not on the Stuff-the Man!

Oh, veiled and secret Power whose paths we seek in vain,
Be with us in our hour of overthrow and pain;
That we-by which sure token we know Thy ways are true-
In spite of being broken, because of being broken,
May rise and build anew. Stand up and build anew!

AIM

It is the aim of this article to discuss deployed countermine operations in a case study format with a view to proposing doctrinal solutions. The following problems will be discussed:

- How do we define the threat?
- How do we balance acceptable risk in peace support operations?
- How does doctrine and equipment help to balance a tactical need for speed of reaction and mobility against slow, resource intensive, deliberate mine clearance procedures?

DISCUSSION / CASE STUDY

The Jowz Valley is located approximately three kilometres from the Canadian camp, Camp Julien, to the southwest of Kabul (see figures 1). This is the valley that achieved notoriety as the scene of the fatal mine strike in which Sergeant Rob Short and Corporal Robbie Beerenfenger were killed and four others wounded on 2 October 2003 when their Iltis jeep detonated a TM-57 antitank mine. The valley itself is bounded by high mountains rising to 2800 m in the west and gentler hills separating it from Kabul city in the east. The valley floor is composed of gently rolling plains and has been dry since August, though cut by numerous pebbly creek beds. The southern end of the valley terminates in the Lalandar Valley, a major approach route to Kabul

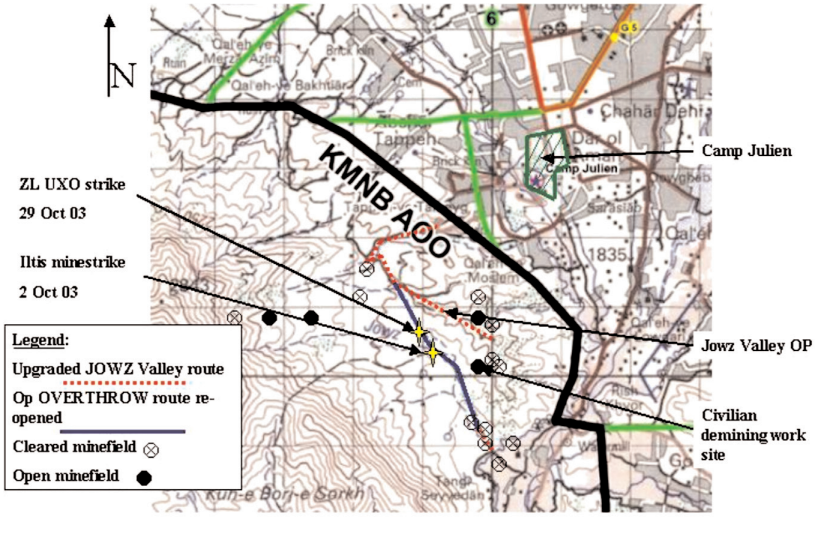

Figure 1: Jowz Valley Map

from the southwest. The valley's northern end is in the area of a major Afghan militia unit (1 Kabul Corps) and in the suburbs of western Kabul. The valley forms a covered approach route to Kabul from the southwest, with dominating views of all of Kabul west obtained from the eastern hillsides. Whoever controls the valley also controls the southern approaches to Kabul and the Camp Julien area. Two tracks lead into the valley: one runs east west to the now-ruined Zalma Restaurant, the other runs north south along the valley length. Not then being in the Kabul Multi-National Brigade (KMNB) area of operations, the Jowz Valley was not patrolled by the German battlegroup that preceded 3 RCR. Its proximity to Camp Julien and easy access to the notorious smuggling route along the Lalandar Valley led to its early identification at the battalion level as a threat area. The desire was to open it for routine patrolling if feasible.

24 Fd Sqn developed what was believed to be a comprehensive countermine and explosive ordnance disposal standard operating procedure (SOP) prior to deployment (reference B). The SOP was based off existing SOPs in Bosnia, SOPs used in Kosovo (several SNCOs had experience there) as well as existing KMNB SOPs in use in theatre, which were gathered during the tactical recce. The theatre activation team engineer received a copy and updated the SOP slightly; most was left as is, as the scope of countermine operations to be done by the battalion group far exceeded both what the theatre activation team was required to do and was familiar with. Upon arrival in theatre and final adjustments, this SOP was disseminated to the battalion group, implemented in operations and given to the national command element for incorporation into theatre standing orders. Main emphases were:

♦ **Immediate Actions**. There were separate procedures depending on the immediacy of the threat. Immediate actions and reporting in each case was detailed.

♦ **Route Tracking**. Route tracking was done through the compilation and use of a cleared route trace controlled centrally at the battalion level. Travel was to be on those routes only. A process of reconnaissance and risk analysis at the squadron OC level was conducted prior to opening new routes. Routes would be either cleared if assessed as high risk, or "proven" by driving in a mine protected vehicle if low risk.

♦ **High Readiness Response**. 24 Fd Sqn maintained a high readiness response to deal with mine strike, explosive ordnance or improvised explosive devices. This took the form of a field engineer section as part of the overall quick reaction force platoon organization, and an improvised explosive device disposal detachment available as part of the KMNB Immediate Response Team.

Engineers are by nature dependant on equipment available. For Op ATHENA, 24 Fd Sqn possesses a variety of countermine equipment, originally selected to provide close engineer support in a mix of close urban and open rural environments:

♦ **Mine Detectors**. The squadron possesses the Minelab F1A4 handheld metal detector, recently acquired in summer 2002. This has been found to be effective in the soils encountered in Kabul, up to depths of 30 cm.

ISSUE 1. The Minelab F1A4 mine detector proved to be effective in the soil and the dry/semi-arid environmental conditions.

♦ NYALA Mine Protected Vehicle. One NYALA vehicle is held. The vehicle is designed to withstand a double TM-57 level mine explosion under any wheel and a single detonation

centrally below the vehicle. Despite a VOR rate approaching 50% (due to rough terrain, poor quality fuel and long logistics tail), it is the primary squadron recce vehicle. Acknowledging that no fatal injuries resulted from previous mine strikes when the vehicle in question was an APC, AVGP, BISON or LAV III, the squadron secondary recce vehicle is a LAV.

♦ **Improved Landmine Detection System (ILDS)**. The ILDS consists of three main components: a protection vehicle (PV), a remote detection vehicle (RDV) and a control vehicle (CV). The PV and RDV are remotely operated. The PV is simply a remotely driven M113 armoured personnel carrier and is designed to remove antipersonnel mines, tilt rod, tripwire initiated, magnetic impulse, off-route and surface mines and munitions using the Pearson surface plow. However, the PV is vulnerable to shallow buried pressure fused antitank mines. The system's RDV is designed to detect buried pressure fused mines only. The RDV uses a combination of a forward-looking infrared camera, a video camera, a sensitive metal detection array and ground penetrating radar to indicate (literally paint) possible mine buried locations. A sophisticated nuclear emitter designed to confirm the presence of explosives is also part of the system, but has proved to be unreliable and consequently useless in this theatre.

The nuclear emitter sensor of the ILDS RDV proved to be unreliable and consequently useless in this theatre.

♦ **Armoured Front End Loader**. One Zettlemeyer front end loader (ZL) with an armoured cab is held by the sqn.

♦ **Mini Flail**. One mini-flail is held. It was designed to explode buried anti personnel landmines, booby traps, and scatterable munitions. Following receipt of poor test results found by Defence Research and Development Canada (DRDC)-Suffield in 2002 (reference C), efforts have been made to return this to Canada. Test results were as follows: "it is difficult to envision a scenario in which the XM2670-A3 mini-flail would be useful. Its inability to trigger anything but the most shallow mines, its inability to seriously damage or break apart mines, its inability to thoroughly cut light vegetation, and its inability to perform even the most basic mobility operations caused the trial team to have significant concerns about the usefulness of the machine."

The mini flail was not employed because of a lack of confidence derived from DRDC trials conducted in 2002. As mini flails have been available within the system for at least five years, the question that begs to be asked is how the unproven system got issued except for trial purposes?

Threat definition was the first step in the squadron countermine SOPs, and is the responsibility of the mine/countermine officer (an experienced, focussed squadron intelligence officer). Information is based on mine threat information held in the Information Management System for Mine Action (IMSMA), forwarded to us via ISAF liaison officer from the United Nations Mine Action Centre for Afghanistan (UNMACA). Depending on the amount of information in the database, minefield locations, status (surveyed, cleared or open) and minefield records may be available. We received indications of several cleared minefields on the valley floor, with three still classed as "open" in the western area. Also noted was a lack of vehicle traffic in the area and unconfirmed reports of civilians stating "the area had been mined." Lack of civilian traffic in a military area is not in itself unusual, and persistent local thought of areas still being mined following clearances has been encountered before. It was decided to conduct a ground recce

with a view to using the ILDS (at least the PV) as a means of proving the route and practicing ILDS drills.

Recce was conducted on 21 September. The recce plan was to observe both the northern and southern ends of the route. Vehicle tracks were noted on the road at the northern end, though no vehicles were seen. At the south end near Jowz village, the bottom of an Italian antitank mine (TC-6) was found sitting on a rock wall. Locals spoken to were unable to explain the mine's origin. The locals appeared very receptive to Canadian troops, and to ISAF in general. After speaking to them through an interpreter, the recce party was informed that there were no anti tank (AT) mines in the area but there were anti personnel (AP) mines in the foot hills to the west and that deminers were working in the hills to the east. The village elder said that the last mine incident in the area was an antipersonnel mine incident several years ago. Further, it was stated that civilian deminers drive the route daily to their work site just to the north of the village. An elderly man from the village was willing to walk up the valley with the recce party.

As OC, my risk assessment attempted to balance several conflicting reports:

- knowledge of the area as a conflict site between the Russians and mujahideen in the past due to old defensive positions in the valley;
- UNMACA clearance reports;
- observations of local road use (by civilian deminers when clearances were ongoing in the past, only by sheep herders at present);
- unconfirmed reports of a continued mine threat (exact type of mine and identity of source uncertain); and
- reports by civilians living and herding sheep in the southern end of the valley that the mine threat was AP and was now in the hillsides and not the valley floor.

I concluded that, on the whole, the evidence pointed to a past AP mine threat in the valley floor and a current AP threat on the hillsides. The main risk was thought to be washout from the hillside of AP mines. I assessed the risk to our own troops as "low" to open the route, deciding to use the ILDS PV to open the route as a test of the system.

Under the existing SOPs, an attempt was made to prove using the ILDS PV. The PV was used to scrape off the surface layer along the entire route, no indications of mines were found. In effect, driving the route proved our confidence in the route. The only find was a mortar UXO near the roadside. However, the ILDS section commander reported that despite his best efforts, he could only prove the ridgeline to the east (from 42S WD 082 117 to 42S WD 095 140) and that a route connecting the northern and southern ends of the valley could not be located using the remote camera imagery from the PV. Human eyes were needed.

The ILDS PV operator had difficulty in locating this "black track" using the remote camera imagery.

Following an assessment of the southern section of route (from start at 42S WD 0853 1140 to end at 42S WD 1001 0888) as unsuitable for the ILDS, the risk assessment was re-done, with a focus only on the southern segment. From visual observation from the ridgeline to the east, there seemed to be two possible (indistinct) routes, one along the east and one along the west

side of the valley. UNMACA minefield records were again re-examined, and it was assessed that a route could be reconnoitred which would avoid the known problem areas. As long as the route did not have to pass through these areas, the southern segment was still assessed as low risk. The squadron recce sergeant was ordered to find and prove the route from the northern end. The sequence of events was as follows:

♦ Due to the long-term unavailability of the NYALA with a wheel hub fault (over three weeks), the route was located and proven with a LAV at 0830 hrs on 1 October. The use of a LAV was a calculated risk, but was seen to be the next-best alternative to the NYALA. Following proving, a Bison ambulance and an engineer MLVW section vehicle travelled the route from north to south. The route was noted to be discernable, but was extremely rough (a "black track" in military parlance) with no signs of any recent use. At this time, further information was gained from the civilian demining team working at the south end of the valley. They stated that in their work on the hillside since 2001 that they had found 352 AP mines and no AT mines. The road was declared open.

♦ Returning from the day's tasks, at approximately 1530 hrs on 1 October a LAV, a Bison ambulance, an engineer MLVW and two Iltis vehicles (OC and SSM) travelled the route from south to north.

♦ At approximately 1100 hours local on 2 October a LAV, a Bison ambulance and one LSVW travelled the route from north to south. This was both to conduct a routine EOD pickup and recce the route for subsequent repairs. At approximately 1130 hours, the LAV travelled the route again from south to north returning to Camp Julien.

Mine Strike! At 1324 hrs 2 October, a routine Parachute Company patrol mounted in an Iltis travelled the road from south to north. The patrol hit a TM-57 antitank mine in a dry riverbed at GR 091 103. The explosion killed two soldiers, and injured four others. Neither the board of inquiry, tasked to look into internal CF issues, nor the National Investigative Service inquiry, looking into the mine strike from a criminal perspective, have been made public at the time of writing. From an engineer's perspective, there are two main possibilities. The mine may have been an old one, laid up to 12 years ago by Russian soldiers or later mujahideen fighters. An old mine may have been laid in location, or may have been washed down the streambed in periods of high rainfall. Experience in Bosnia and Eritrea indicate that deeply buried, old mines may sometimes be trafficked many times before being triggered. The alternate possibility is that the mine was a new one, laid over the preceding hours by hostile forces who did not want the Jowz Valley patrolled or who wished harm on KMNB soldiers. This is the threat definition question at the heart of countermine operations. An open-source quote by Lieutenant-Colonel Safa of the Afghan NDS (secret police) illustrates the quandary. While he professed a belief that the mine was old, at a site visit I accompanied him on he stated that forces were active against us, "the enemy is awake, and we cannot recognize them."

Immediate responses to mine strikes are a standard drill. Sadly, in this instance, it was no practice, with drills being executed by injured soldiers while a vehicle burned and ammunition cooked off. I was present at the scene only later that night, and so I will not attempt to detail the scene on the ground. By all accounts, good training and tough soldiers took over. Injured soldiers self-extracted and helped each other, while another nearby patrol and the Quick Reaction Force of infantry, engineers and medics responded promptly to secure the scene, treat

injuries and recover all soldiers (see figures 7 and 8). Final recovery efforts and on-scene investigation took several days, including a deliberate sweep of the area to ensure complete safety and allow proper forensics. No further antitank mines were found, though several more TM-57 fuses and shipping plugs were located at the scene, unburied. A PMN-1 mine was found several metres downstream, its location and partial burial giving the appearance of washdown from the western slopes. Time may or may not provide a definite verdict, though at present, the strike has been treated as an attack (reference D).

The prime engineer task for 3 RCR was mobility, and the re-opening of the patrol track was seen as a high priority task; we felt that we needed to regain the initiative and demonstrate resolve. Moreover, the tactical imperative, which demanded a military presence in that area, was unchanged. The engineer plan for re-opening the route needed to cater to both the old mine and new mine possibilities. The original threat analysis was revisited, but no new information was forthcoming - all known minefields were in the western side of the valley or were in the hillsides. The squadron senior leadership, both SNCOs and officers, formally discussed the matter. It was assessed that the likely problem areas were the riverbeds, threatened by either remining or washdown. The subsequent plan saw a detailed manual clearance of the riverbeds, with a dismounted visual sweep of the remaining road to confirm our risk assessment. The armoured ZL would then be used to scrape the entire road surface to clearly delineate the road. Following this, a covert sniper overwatch of the route would observe any local activity over a period of several days, aiming to disrupt any re-mining attempts. Finally, significant heavy equipment work to remediate the dry fords and several steep grades would be preformed using the armoured ZL. Orders for this task, named Op OVERTHROW, were issued and work began on 27 October.

Courtesy of—Combat Caméra

Op OVERTHROW was undertaken by the Field Troop (5 Troop), using a dismounted field section to conduct clearances, followed 100m back by the ZL, with a Sniper Section OP established in overwatch. Eight dry creek beds were cleared to a "level 2" standard, that is to the depth of metal detectors and prodders (about 20-30 cm), while the rest of the route was visually swept. Metal UXO fragments were found, but no further mines. Cleared riverbeds were marked on the left and right with orange spray paint. Over the remainder of the road that was visually swept, the centreline was marked with orange rocks. At 1310 hrs on 29 October, while working 100 m behind the clearance section, the ZL struck an explosive device. The left front tire was blown off. The operator was uninjured. The operator at first thought that one of the dismounted sappers had hit a mine; it was only when they all appeared to be very excited did he realize that it was he who had struck the device.

The strike occurred on the edge of a section of road that had been visually swept, just prior to where a riverbed clearance had occurred. The ZL had been in the process of laying river-run fill material on the route and had passed directly over the area several times prior. Inspection revealed significant heavy equipment tracks in uncleared areas off the road in borrow pit locations, raising issues of both supervision and proper execution of orders at several levels. Forensic opinions were at first divided on the source of the explosion-it was assessed as not being an attack, but possibly being either a mine or a UXO. Based primarily on copper residue found at the point of impact, the final forensics report stated that this was believed to have been a deeply buried rocket-propelled grenade (RPG) round (reference E). This round was assessed as being below the depth of metal detectors, having been initiated either by repeated pressure or by the heavy equipment excavations. Luckily, previous off-route movement had not led to the strike.

The ZL is able to survive an explosive strike (suspected RPG -between 253 grams and 376 grams of explosive charge contained in an antitank warhead, possibly buried below 30 cm) suffering a mobility kill but with very little other damage. Remarkably, the operator didn't initially register that he had been involved in an explosion.

Meanwhile, the original board of inquiry's investigation was proceeding, and several mid-investigation recommendations were made. Firstly, a thorough search of records at UNMACA unearthed a hand-sketched map indicating that mine clearances along the Jowz Valley floor had not been as extensive as thought. This map was not incorporated into the IMSMA database, and noted a break in demining activities in the area of the ZL strike. In the eyes of engineers everywhere, uncleared areas are treated as suspect, regardless of whether mine indicators are present. The threat analysis was re-visited. The route was re-designated "high" risk over its entire length. Secondly, the board of inquiry recommended amending the existing SOPs to more closely conform to CF Field SOPs (reference F). These had been promulgated to the Army in 2002, but no engineer officer or SNCO in the squadron (or any other Canadian engineer in the National Command Element or KMNB Headquarters) was fully aware of their existence.

It was recorded by the board of inquiry that the CF Field SOP had been distributed to those deployed. It is concerning to note that Engineers representing no less than two field units, a brigade headquarters, an area headquarters and the joint headquarters were not familiar with this publication and consequently had not referred to it in the preparation of the 24 Fd Sqn (Op ATHENA) Mine Clearance and Explosive Ordnance Disposal SOPs.

A review was conducted and revised squadron SOPs were issued. Main changes were as follows:

♦ **Route Tracking**. The "proven route trace" was re-named a "designated route trace." This gave further control on use of routes; routes are designated as open, closed or restricted. Restrictions can be for force protection (i.e. armoured vehicles only) or for mobility (i.e., unsuitable for LAV).

♦ **Risk Assessment and Route Reconnaissance**. The squadron risk assessment pro forma was further refined. The final decision was now "go," "no go" or "go with risk." This explicitly acknowledges the risks we cannot remove in the conduct of some tasks. The term

"route proving" was removed. Route proving in our previous usage of the term was used to help define a confidence level in the route-the lack of a mine detonation while traveling a road did not in itself "prove" anything conclusively. The actual procedure to open new routes was still much the same as before, conducting a risk assessment, observing a route and finally conducting a route reconnaissance (driving it and inspecting it) in a mine-protected vehicle. Following this procedure, the route was to be "designated."

The squadron had now been twice frustrated in the opening of the Jowz Valley route. With a changed threat analysis, a clearance along the entire route was now required. Clearances may be as little as several metres per day at the speed of a dismounted sapper with a mine detector and prodder. However, benefiting from a significant amount of previous heavy equipment work on the route, the ILDS was once again brought into battle. On the now-improved sections of route, the RDV was assessed as capable of performing the required sub-surface detection. Anywhere heavy equipment work was to be conducted, dismounted sappers would once more re-clear by hand, following which the RDV would be able to sweep the entire route. Sappers would investigate any RDV-indicated suspect areas. This again was a troop-size task, undertaken by support troop (6 Troop). As Op OVERTHROW II, this final clearance operation was carried out without incident, and without any further UXO or mine discoveries, over 27 November to 1 December.

Presently, the Jowz Valley road is now re-opened, designated as "armoured vehicles only." Immediately following route re-opening, several suspicious incidents were noted. In one instance, unknown persons placed a circle of red rocks (as is common to indicate mines) on the road overnight. A thorough search found no mines present. Locals were also noted digging rocks out of the road surface for use as house foundations. The quick reaction force was twice dispatched to apprehend suspicious individuals in the vicinity. Consequently, a permanent OP on the eastern ridgeline now maintains observation over the valley. Locals are actively warned against appearing to be disturbing the road, and suspicious incidents have ceased. 3rd Battalion's influence over the Jowz Valley is now established—the true history of the valley, though, is still shrouded in mystery.

LESSONS LEARNED

As noted by the Army Lessons Learned Centre, a lesson is not learned until behaviour is changed. As such, some lessons have been learned in-theatre, with accompanying changes in our procedures. Other pertinent points raised are beyond the squadron level in correction and are raised here for consideration by the wider Military Engineer Branch.

THREAT DEFINITION

Threat definition for the Jowz Valley was rigorously done. This is an essential first step in any countermine operation. This should be as detailed as possible and may include:

- Map reconnaissance of known minefield locations. In this case, we sought and obtained an unprecedented copy of the entire IMSMA database to aid in quicker mine background findings.

- On-ground consultation with UN agencies or non-governmental agencies. Due to the volume of potential requests and the time delay, this was not requested. It has been incorporated into any future complex countermine operations.

♦ Consultation with local government / faction agencies (local police, secret police, local militia forces). These are not friendly forces. In any dealing with local factions operational security is a concern and information gained must be weighed for truthfulness. Often one side may seek to make themselves look better, as was the case with the NDS officer interviewed. Rightly or wrongly, he noticeably sought to vilify the mujahideen faction he had fought against in the past, while he minimized his own faction's role.

♦ Historical research and appreciation of the particular conflict area. In particular, this may identify previous conflict lines and allow for local lore to be evaluated in context. This calls for considerable and wide-ranging background reading on the part of anyone responsible for threat analysis. For this mission, several sources were found particularly useful, including Stephen Tanner's Afghanistan - A Military History From Alexander the Great to the Fall of the Taliban, as well as two books from the US Foreign Military Studies Office: The Bear Went Over The Mountain: Soviet Combat Tactics in Afghanistan and The Other Side of the Mountain: Mujahideen Tactics in the Soviet-Afghan War.

♦ Ground reconnaissance and observation of the area if possible. Nothing beats first-hand knowledge and impressions.

♦ Consultation with locals in the area. Proper use of the interpreter is necessary to avoid leading questions and the corresponding risk of hearing what you want to hear. The background of the locals is also essential. In some cases, returning displaced persons may know little of the conflict and its detritus, in other cases, locals may have a wealth of knowledge that is essential to tap.

It must be recognized that this process of threat definition will take time (several days to a week) depending on the area. Task urgency may preclude all possible sources being consulted. In any case, data gained may not be complete and may be misleading. All this leads into the next crucial point: the acceptance of risk.

It must be recognized that this process of threat definition will take time (several days to a week) depending on the area. Task urgency may preclude all possible sources being consulted. In any case, data gained may not be complete and may be misleading. All this leads into the next crucial point, that of acceptance of risk.

RISK

Army doctrine as found in Reference G acknowledges the necessity of accepting risk inherent in all we do:

> Commanders should be encouraged to take the initiative without fearing the consequences of failure. This requires a training and operational culture which promotes an attitude of calculated risk-taking in order to win rather than to prevent defeat, which may often appear as the 'safer option.'… The Canadian Army approach to operations requires commanders who seek the initiative and take risks. Risk-taking means making decisions where the outcome is uncertain and, in this respect, almost every military decision has an element of risk. Although the element of chance in war cannot be eliminated, foresight and careful planning will reduce the risks. The willingness to take calculated risks is an inherent aspect of willpower but must be moderated by military judgement. A good commander acts boldly, assesses the risks, grasps fleeting

> opportunities and, by so doing, seizes victory. (Chapter 2, The Human Component of Command)

Establishing patrol routes and expanding a new area of operations will entail certain risks. In an area like Kabul, not all dirt tracks can be deliberately cleared in a reasonable period of time. In an area that has been a battlefield at one point in time, there is a risk of unexploded ordnance throughout. Facing a potential terrorist enemy, there is a risk of targeted mines or improvised explosive devices. An exceedingly slow approach to open new routes will make our own patrols less effective and less able to react, thus increasing the danger. A careless approach to route opening will endanger lives needlessly. Over the course of the Jowz Valley operations, the engineer risk assessment process was refined. Thus, we have a deliberate risk assessment process completed by a military engineer. Final assessment of that risk, at the battalion group context, is done at the OC level. Further to that, the commander of the soldiers involved must be aware of the risks. The CO will accept the routine level of risk run, and will decide on exceptional levels of risk. In our practice, low risk route openings are approved at the OC level, while high risk clearances, or a decision to "go with risk" is done at the CO level. Risk (minimized to the best extent possible by good procedures and sound plans) is accepted when a real operational requirement exists and the mission success hinges on the proposed countermine operation.

LEADERSHIP

It is a responsibility incumbent on leadership at all levels to plan thoroughly and intelligently, to give clear orders, and to supervise their execution. This is obvious, but bears re-emphasizing. The best drills and procedures are for naught if they are not followed, or if risks in excess of those planned for are taken. Not everything went as planned during operations in the Jowz Valley. Oversights needed to be corrected, leaders were held responsible for proper task execution and procedures were re-enforced. This will occur with any task. Good leaders learn from their mistakes (they will inevitably make some) and do not repeat them. Further, drills and doctrine on previous tours may not necessarily still be in practice-all may not be "the way it was done before." After-action reviews, lessons learnt and articles such as this one seek to pass that learning on. As aptly summarized in reference G:

> Leaders should not expect that all missions would be accomplished free from errors, flaws, or less-than-perfect performance. Demanding such rigid standards leads to over supervision and paralysis; it produces timid leaders, afraid to make tough decisions in crisis and unwilling to take risks necessary for success in military operations. Good leaders accept that things may go wrong, even with the certain knowledge that a subordinate has done all within his power to prevent an incident (Section 2, Para 7).

The best drills and procedures are for naught if they are not followed, or if risks in excess of those planned for are taken. Not everything will go as planned. Oversights need to be corrected. Leaders need to be held responsible for proper task execution, but it must be understood and accepted that missions will not be completed error-free.

DOCTRINE-COUNTERMINE RECCE

While the existing doctrine for clearance operations (what you do with the mines once found) is crystal clear, the doctrine for recce is less so. Perhaps this is because once mines are located

or suspected, it is fairly easy to propose safe, standard drills. These work to great effect. They are slow and methodical, but successful in dealing with the threat. The remaining question is obviously what we (along with most other combat engineers in the field) originally called route proving, now called route recce. There are conflicts between what is taught at the Canadian Forces School of Military Engineering (CFSME), the CF Field Standard Operating Procedures, the draft doctrine under development (Military Engineer Training Notes) and our field perspective:

♦ **Current Teaching at CFSME**. The requirement for a visual inspection of a low risk route by walking or driving it is eluded to obliquely. No formal doctrine is cited as a reference, but the lesson plan for Performance Objective 57.01, Plan a Minefield Clearance Operation, on the Basic Engineer Officer Course Phase IV refers to "route inspection" done in a mine protected vehicle on paved routes. What should be done in a theatre where paved routes are the exception rather than the rule is not stated. Other lesson plans refer to the same process as "route proving" while still other lessons do not mention the process under any name.

♦ **Landmine and Explosive Hazards Field SOPs**. These were drafted by the J3 Engr staff and disseminated to the CF by message in 2002 (reference F). Following the mine strike Board of Inquiry interim recommendations, these SOPs have gained wider prominence in the Military Engineer Branch. These are intended to serve as the basis for in-theatre SOPs, and were found to be a very useful reference in general. Unfortunately, the issue of route reconnaissance is sidestepped. Annex B of the Field SOPs gives the following guidance:

- **Recce**. The process to obtain by visual observation and/or other detection methods, information about the mines or explosive hazards situation;

- **Proof**. The process following breaching or clearance to reduce the risk that a route or area continues to be threatened by mines or other explosive hazards. The process includes the use of visual inspection and mine detectors; and

- **WARNING**. **Trafficking** a route or a piece of ground using a heavy vehicle, AFV or a mine resistant vehicle such as a **Nyala** or Mamba **DOES NOT** amount to anything. **It is not a proofing method**. A mine resistant vehicle such as a Nyala or Mamba is to be utilized for recce and/or casualty extraction **ONLY**.

The definition of "proofing" in the Field SOPs is considerably different from what we originally defined as "proving" in our SOPs. In the context of a recce, the action of traveling a low risk route, and visually confirming first-hand that the assessment is correct before opening the route, is not even mentioned explicitly (though the warning seems to discourage this). Even though this is only conducted after thorough threat analysis and risk assessment, this activity is potentially the most hazardous—it may result in a mine strike if the assessment is wrong. Unless a clearance operation is completed, this would also seem to still be required. The alternative of manually clearing all gravel routes is neither practical in Kabul, nor required as the majority of routes are not mined.

♦ **Draft Military Engineer Training Notes (METNs)-Route and Area Clearances**. This document is intended to remedy gaps in doctrine prior to the completion of formal pamphlet re-drafting. It is anticipated that the CFSME Doctrine Cell will publish this document early in 2004. The draft reviewed at reference H provides much useful information on employment of current and anticipated countermine equipment. This information is only found elsewhere in the applicable operator's manuals, which are not always easy to locate.

Interestingly, the use of heavy equipment as a valid mine clearance tool is detailed. However, there are several significant conflicts with the Field SOPs on the recommended method of risk assessment and route designation. The METNs propose a more complex method of route designation. Further, it is felt that the proposed risk assessment format too quickly defaults to a deliberate clearance method. For example, in application in Kabul, all routes with no observed traffic would necessitate clearance. The Field SOPs deal better with the acceptance of risk. Encouragingly, though, the process of route recce (called proving here) is much better defined:

> *…It must be remembered that there are no "silver bullets" when it comes to mine detection. The technologies currently used by the Land Force on deployed operations range from the methodical, albeit slow, use of the Improved Landmine Detection System (ILDS) and Aardvark which provides a very high probability of detection to the employment of the Nyala mine proof vehicle (MPV) to conduct a level one search (visual) which is quick but far less effective. Dismounted sappers are the most reliable way to conduct route clearance, but this technique is even slower in its application. Route proving is a field expedient method of repeatedly driving a vehicle over a route to try to confirm whether or not the route is mined. (Section 1, Para 4)*

There are conflicts between what is taught at the Canadian Forces School of Military Engineering (CFSME), the CF Field Standard Operating Procedures, the draft doctrine under development (Military Engineer Training Notes) and our field perspective.

Overall, current doctrine gives useful direction regarding risk assessment. Developing doctrine gives some direction on the thorny issue of recce. In practice in Kabul, and in accordance with known best practices in deployed combat engineer operations, 24 Fd Sqn continues to traffic a mine resistant vehicle (preferably the Nyala) only on a route where we do not expect to encounter mines. This has been termed simply a route recce, and allows us to make the final call as to whether that route should be opened to traffic in any form. Should we assess the risk of mines as high, we will clear routes.

EQUIPMENT

Given that the most difficult issue to define doctrinally is the recce aspects of countermine operations (the "finding the mines" problem), it should come as no surprise that the greatest perceived equipment deficiency is also in this area. However, as technology improves, new equipment will constantly enter service. Lack of the best equipment will not preclude countermine operations, but will increase the risk to the sappers so tasked. Equipment development or acquisition is needed in the following areas:

♦ **ILDS**. On tasking at Bagram Airfield, the ILDS PV has proved ineffective in fully clearing AP mines (still detonating AP mines after 14 passes). It was only used successfully in Jowz Valley clearance operations with a section of dismounted sappers and an armoured front-end loader preceding it in difficult terrain. Modifications are underway to add a full-width roller to the PV to ensure complete clearance of AP mines. The ILDS RDV has been found to greatly improve clearance operations against deep buried mines only, and only in the best field conditions. The RDV needs to be greatly ruggedized, and perhaps limited to a "check clearance" or "proofing" role. That is, in fact, its only current use in theatre.

The ILDS RDV has been found to greatly improve clearance operations against deep buried mines only, and only when accompanied by dismounted sappers and armoured heavy equipment. The RDV needs to be greatly "ruggedized."

♦ **Full Width Rollers**. A vehicle with comparable mobility and speed to the LAV fleet, capable of pushing a full width roller, would be useful in both a recce and a clearance role. Recalling previous tours, sappers of 24 Fd Sqn have noted that the Czech contingent in Bosnia operated a tank with full width rollers in this manner. A modified LAV or large heavy equipment (front end loader for example) may well be suitable.

A vehicle with comparable mobility and speed to the LAV fleet, capable of pushing a full width roller, would be useful in both a recce and a clearance role.

♦ **Dogs**. Explosive search is closely linked with countermine recce. While investigation of the benefits and drawbacks of explosive-sniffing dogs is outside the scope of this article (and the expertise of this author), this issue certainly bears investigation, especially in light of the high financial cost of technological approaches to the same problem. In theatre, dogs are successfully used by UNMACA in a recce role to survey potentially mined areas. The Croatian EOD teams also use dogs successfully in a search role, though not in countermine operations. The absence of any movement in this area seems inexplicable from a field perspective.

The investigation of the use of dogs for countermine recce [and in other force protection roles], which have proved successful in this theatre for both mine and other explosive search merits significant attention, especially in light of the high financial cost of technological approaches that have proven ineffective or useless.

♦ **Mine Protected Recce Vehicles**. Mine protection must be a key consideration in the selection of all engineer vehicles. Existing vehicles are less mine resistant than commonly thought, as the minestrike board of inquiry highlighted. DRDC studies cited by the board indicate that while protection is better than other in-service vehicles, an inside-the-wheel mine strike can still cause a catastrophic hull breach (see figure 10). This is important to know in assessing the further risk of using sappers mounted in LAVs in a recce role. The Nyala vehicle can sustain a mine strike, but is held in very limited quantities, and is too small to be used for an engineer section. Procurement is underway for a second Nyala for Op ATHENA, but further

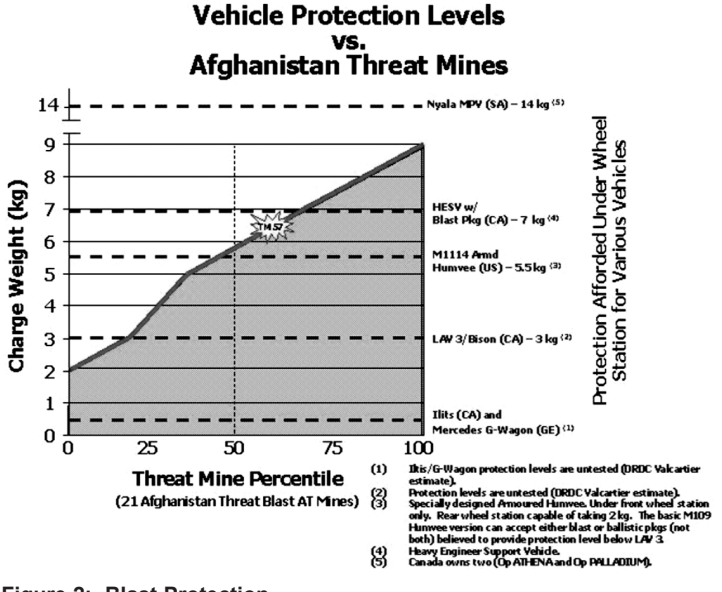

Figure 2: Blast Protection

development of engineer mine protected vehicles, including LAV add-on mine packages is urgently required.

Mine protection must be a key consideration in the selection of all engineer vehicles.

RECOMMENDATIONS

In summary, the conduct of the opening of the Jowz Valley route over the September to December timeframe by 24 Fd Sqn covers the complete spectrum of countermine operations. Over that period, almost all the squadron sappers participated in countermine efforts of one sort or another, tackling challenges with vigour, skill, perseverance and courage. The struggle was both against flesh and blood in the form of a possible enemy threat, and against the more impersonal elements of earth, rock and TNT. The mobility challenge of safely opening new routes will remain for all deployed combat engineers, in all foreseeable theatres. Key lessons drawn out of our experiences are fourfold. Firstly, a careful threat analysis is the keystone for all countermine operations, helping to define if soldiers and equipment need to be brought to bear in a resource-intensive clearance operation. Secondly, while some countermine equipment works well, new equipment that aids in the overlooked area of search or recce is required. Thirdly, a well-disseminated doctrine that helps to define efficient, rapid and effective methods of recce and locating mines needs to be refined. Closely linked, and most importantly, it must be recognized that well thought-out risks will need to be run in all operations. Operations in a higher risk environment need to be frankly acknowledged, and are a key to enabling an effective, reactive and robust expeditionary force. We in the 3rd Battalion The Royal Canadian Regiment Battalion Group continue to honour the memory of our fallen comrades, finishing the mission they started, establishing an ISAF presence wherever required in the area of operations.

About the Author

Major Keith Cameron is serving as the Officer Commanding 24 Field Squadron on Operation ATHENA Roto 0. 24 Field Squadron has a strength of 99 all ranks and is responsible for providing all close engineer support to 3rd Battalion The Royal Canadian Regiment. Engineer responsibilities are focused on mobility and protection tasks, including route and area opening and clearances, mine tracking, explosive ordnance disposal, improvised explosive device disposal and heavy equipment support. Major Cameron graduated from Royal Military College in 1995 with a Bachelor's degree in Civil Engineering. He has served with 21 Engineer Regiment (UK) in Germany as a troop commander, at the Canadian Forces School of Military Engineering as both an instructor and as staff, and with 2 Combat Engineer Regiment as the operations officer and currently as squadron commander. He has two previous tours of duty in Bosnia.

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TARGET ACQUISITION COORDINATION CENTRE—LESSONS LEARNED FOR BOTH TUAV AND CBTA RADAR INTRODUCTION ON OPERATIONS

Captain R.N.W. Little

BACKGROUND

The deployment of target acquisition (TA) assets on Operation ATHENA was unique for several reasons. Firstly, it was the first time in living memory that Canada would employ TA assets in operations. Secondly, and arguably most importantly, the CF leased and quickly purchased two new systems to provide the capability on short notice. This has produced its own set of challenges and has presented an unprecedented opportunity to capture a great number of lessons learned with regards to these equipment systems. The procurement of the Sperwer and the lease of the Arthur were done in response to an identified need. The rocket threat against peacekeeping forces and the need for an efficient air observation platform precipitated a compressed procurement process. This process was executed at the expense of following a comprehensive, thorough evaluation and experimentation procurement that would have not allowed these sensors to arrive into theatre in a timely manner. These observations are prepared by the operations officer and operations WO of the TACC, both of whom have completed the TA Artillery course with the British Army. Because doctrine for TA on peace support operations has not been developed, many of the procedures employed during Op ATHENA were adaptations of proven warfighting practices.

AIM

The aim of this letter is to outline the lessons learned regarding the introduction of the tactical unmanned aerial vehicle (TUAV) Sperwer and counter battery target acquisition (CBTA) radar Arthur systems to the CF on Op ATHENA and their coordination by the TACC.

DISCUSSION

TACC

Upon arrival in Kabul, it was quickly assessed that there was no coordination for any intelligence, surveillance, target acquisition and reconnaissance (ISTAR) capability within the area of operation (AO). The separate system commanders would attend a morning operations conference and independently decide which activities during the day would best suit their systems. This included the two Dutch AN-TPQ-36 Firefinder radars and the German Luna TUAV. Further, the Luna would block book whole sections of the AO for their flights, without coordination with any other assets. As a result, the ASCC instituted coordination measures, which are discussed in their lessons learned.

Once the ISTAR CC stood up, the TACC was able to coordinate the employment of the Dutch radars, German TUAV and the Canadian radars. The multinational nature of the employment of these sensors helped broaden the base of experience within the TACC.

The TACC was based exclusively on the brigade artillery intelligence officer (BAIO) capability, which is traditionally found inside the Fire Support Coordination Centre (FSCC). Due to the importance of information gathering to the mission, the BAIO/TACC was moved from the FSCC to the ISTAR CC. However, due to the specific nature of the job that had to be done, the TACC was formalized as a separate CC.

The initial organisation or the TACC consisted of one Capt, one WO, one Sgt, one MBdr and four Bdrs. The final organisation was one Capt, one Sgt, one MBdr and three Bdrs. The Sgt position was over ranked to WO because there are no 6B qualified Sgts in the Artillery for locating. The entire cell was sourced from the Royal Canadian Artillery School (RCAS) in Gagetown. The Capt and WO are graduates of the Gunnery Careers Course Depth Fire, a locating artillery course conducted by the UK Artillery. This reduced organisation proved to be too small for a 24/7 tempo for long periods of time. Lesson: Due to the 24/7 nature of the cell, it must be more robust, i.e., eight personnel.

The role of the TACC was to provide coordination for all TA assets in theatre, Sperwer, Luna and Arthur. The TACC also performed artillery intelligence duties in the battle against rocket attacks. This expertise is traditionally found with the BAIO working in close cooperation with the FSCC. As part of the overall experimentation for Op ATHENA, the TACC became a "stand alone" coordination centre, working closely with the ISTAR CC. This allowed the ISTAR CC much closer coordination of the assets conducting the ISTAR battle. Observation: Due to the commonality in TA asset planning (TUAV and radar) and the link to fire support planning, the TACC should continue to operate in close cooperation with the FSCC, while the ISTAR CC focuses on the integration of all available sensors as part of the overall ISTAR plan. In this manner, the ISTAR focus is on exploiting the various strengths of each sensor platform (UAV, aviation, forward observation officer [FOO]) rather than the detailed minutiae of technical sensor planning and tactical execution.

INTEGRATION OF THE TUAV IN THEATRE

The Sperwer TUAV is a French TUAV system designed to be used in warfighting scenarios within a larger framework of air planning. It works well at lower altitudes in temperate weather. However, Kabul is a peace support operation (PSO) with many challenges, including mountains, high altitude, extreme heat and dust. This provides challenges with height and heat for lift and recovery, as well as turbulence, all which potentially can damage the air vehicle.

As the TUAV is being introduced in the CF inventory, build-up of the necessary trained and experienced personnel will take some time. Until this happens, all training resources should de dedicated to TUAV crews identified for deployment vs. personnel in the normal TUAV training cycle. Crews should be thoroughly proficient prior to the validation exercise. Times between validation and deployment should be as short as possible so as to reduce the loss of proficiency. **Observation**: Contractor-provided training needs to be validated by CTC to confirm it meets our needs.

Training by the contractor was solely based upon the operation of the system in isolation of real world situations. This meant that the first non-contractor flight was conducted in an operational theatre with far more issues than were experienced during the training. **Observation**: Training should also include the tasking and airspace request procedures, product analysis and command and control for headquarters staff and comms/data link issues for the G6 staff.

Once in theatre, crews will need time to conduct theatre-specific training in order to assess operating conditions and equipment reaction (wear and tear). Regulations require a certain number of launches and flights for crews to maintain currency. Operational tempo will dictate the need for proficiency training during the tour. **Lesson**: HQ staff and commanders at all levels must be cognizant of the requirement to maintain skill proficiency.

As siting is important, SOPs for establishment of launch and recovery areas need to be developed in order to minimize set-up time and interference from other users. Data link and comms systems need to be organized and tested prior to the crews arriving in theatre. As a result, most of the preparation of the equipment and launch and recovery locations was conducted while the troop was waiting, not allowing for concurrent activity. Most of the preparation that was needed was unknown until the troop arrived in theatre. In fact, the TAV that came prior to the arrival of the troop was poorly briefed on the requirements. The result was that the designated primary landing zone, which was prepared by two sections of engineers over 20 days, proved to be too small. **Lesson**: Preparations must be conducted prior to the arrival of the bulk of the equipment.

Communications, software and data link issues proved to be a point of some contention. TUAV imagery quality issued by all source information cell / graphical imagery support team (ASIC/GIST) is far below what can actually be seen directly from the ground control station (GCS). ASIC/GIST confirms that this is the best product they can provide, which indicates probable software compatibility or data link problems between the TUAV GCS and ASIC/GIST. **Observation**: These problems should normally be resolved in Canada before deployment.

Time will be required for the TUAV system to be fully capable once in theatre. TUAV crews will need to conduct many flights in order to assess environmental conditions (launch area and landing area parameters / restrictions, density altitude, operating area geography, etc.) that will determine the operating envelope of the TUAV.

Artillery personnel with previous TUAV experience, either from formal courses and / or training with other nations, should be part of the HQ staff / TACC. In-depth TTP and SOPs need to be established and then tailored early on for theatre specifics.

Potential users need to be regularly briefed on tasking procedures, capabilities, and limitations of TUAV.

When requesting a TUAV mission the following information must be provided:

- an accurate description of the information sought and the target location;
- target priority;
- whether equipment identification is required;
- whether artillery expertise required in the search; and
- the latest acceptable time that the TUAV mission product is required.

The following principles must be borne in mind:

- All missions must be initiated by cueing from other systems or by G2 assessment.

- A detailed statement of the specific information sought from the mission must be given in the TUAV Request.

- Sensor runs should be kept as short as possible to minimize the time required to analyze imagery. Quality of imagery from the GIST must be improved.

- Equipment-type identification should only be requested when necessary in order to minimize analysis time. This is not necessary for every mission.

- Missions should utilize the penetration range of the TUAV. Other systems exist that can provide the required information within the required time.

TUAV mission priorities will vary with each operation and even phases of an operation. Factors that must be considered in determining priorities are:

- the threat;

- the commander's priority intelligence requirements;

- the tactical situation;

- counter battery (CB) policies and the capabilities of our resources to attack targets;

- the terrain throughout the AO; and

- the type of operation or the formation's mission.

TUAV CFFET should be robust enough to initially sustain high consumption rates, including complete air vehicles, until an actual rate is established through theatre specific experience. Spare parts re-supply is a critical issue. TUAV operations can be and have been halted because of a lack of spare parts. **Observation**: All purchase and shipping details should normally be worked out before deployment of the TUAV in theatre.

INTEGRATION OF THE CBTA RADARS

The CBTA Radar Arthur is designed to be a highly mobile sensor that can rapidly deploy to a position, set up, emit and move. It operates optimally in rural areas with slightly rolling terrain on a linear battlefield. In particular, the Arthur leased from the Swedish military is mounted on a BV 206 chassis, perfectly functional for operation in temperate climates. Kabul, on the other hand, is a highly urbanized, mountainous region that suffers from extreme heat during the summer and has an unspecified directional threat. The environment here is hard on all natures of equipment, and the highly sensitive Arthur is no exception.

To prepare for the deployment of Arthur to Kabul, a gun troop from 2 RCHA went to Norway for 12 days of training. The background of all the operators was howitzer (less two air defence gunners with ADATS radar experience). The only experience in the CF in using weapon locating radars rested with the RCAS. Due to the compressed training schedule the RCAS was not able to have anyone that was deploying to Kabul attend the training in Norway. This lead to challenges in finding the middle ground in preparing for operations. The operators trained in Norway were totally familiar with the “button pressing” but were unfamiliar with employment methods or necessary orders and reports. The members of the TACC were able to handle the orders and employment methods, however, they were severely handicapped when asked questions on Arthur performance and capabilities. Also, because of the compressed training

schedule, there was no validation training conducted on Arthur. The result of this compression was that there was no validation training. All the operational preparedness training had to be conducted during the first weeks of the operation. The lessons that were learned in the first weeks of deployment could very well have been learned prior to deployment. **Lesson**: The whole "team" should have been exercised prior to deployment. This could have been done by taking TACC members to Norway to learn the system as well as conducting a validation exercise that included deployment orders, emission orders and command and control activities.

Ericsson Microwave Systems is the contractor that built the Arthur. They offered a 12-day training session in Norway to train the radar troop for the mission in Kabul. In this training the basics were taught in the employment of the radar. The end course exercise in Norway was spent exclusively on localization (determining enemy gun locations). One of the functions that we need to be able to conduct in theatre is the fire control function (directing friendly artillery). The fire control function was not included in the training in Norway, despite being included in the statement of requirements (SOR), and as such was the one thing that the troop did their best to learn in theatre. To their credit, the troop sergeant major (TSM) and the detachment commanders put forth many hours of experimentation and testing to try to get the fire control mode to work. Unfortunately, it was also at the cost of three exercises and about 30 artillery rounds that were fired in an attempt to conduct fire control successfully. **Observation**: All capabilities that are needed in theatre should be taught by the contractor to a level of operational competency.

One of the functions that we need to be able to conduct in theatre is the fire control function (directing friendly artillery)

Unfamiliarity with the system also posed other challenges. The Arthur has detected over 3200 possible contacts, all but two of which have been unconfirmed. At times there have been detections of twenty or more hits within seconds. With the positioning of OPs and patrols it has been confirmed that most of these hits were not actual rounds fired. Without a detailed knowledge of the system it became an exercise in futility to try to determine why we were getting so many false rounds. The Dutch radar platoon had a similar problem, but on a different scale. They determined that the high tension electric wiring around camp warehouse was subject to surges electrically, which caused hits for the Firefinder. We assumed that this was also the case, however we were getting strings of hits where there were supposed to be no wires. Anecdotally, we were able to surmise that aircraft (rotors and jet engines) were causing some of the hits. This was backed up by experimentation, double checking with the tower at the airport and tracking of recorded hits. Many of the hits are on the approaches to the airport and some present a perfect approach track. If we had more experience with the system it would have allowed us to start separating the wheat from the chaff earlier in the tour. **Observation**: An experienced crew with a leased system would have proved invaluable. Perhaps, like the Sperwer, a Swedish operator or two could have come with the system to help out. At the very least, a field service representative (FSR) from Ericsson should have been provided.

While most of the challenges were being faced by the members in Kabul, several calls for assistance were made. Through the DLR and ADM(Mat) chain calls for FSR support were made. However, FSR support was not originally planned and the only contact we at the coalface had with Ericsson Microwave was a tenuous one through e-mail. A more comprehensive support plan would have proven beneficial, not only for training and experience deficiencies, but also the maintenance program. The case in point is that 54D's generator went down with a

maintenance problem. The original intent of the maintenance program was that any broken part would have to be returned to Sweden before a new part would be issued. Unfortunately, with little experience on the generators, the technicians kept the generator so that when the new one came in they would know how to attach it. **Observation**: A more comprehensive FSR program should have been implemented from the start.

The contract for the lease for the Arthur radars was a mirror of the contract that the British Army had for their previous deployment with Arthur to Afghanistan. Simply put, we were authorised 1500 hours of emission time and 3000 kms of road mileage per radar. At any one time there would be one radar down for maintenance. This contract was for 18 months. This contract was originally designed on a lease-to-buy plan, however, Public Works and Government Services Canada (PWGSC) stated that this was not an acceptable contract for the CF, so Ericsson graciously allowed the same conditions for the contract, but on a pure lease basis. The limitation on hours for emission dictated that for a one-year deployment the average daily emission plan would be for 3 hours and 50 minutes per day/per radar. This means that only 16% of the day would be covered by radar emissions. In relieving the Dutch radar platoon we asked the questions on trends and abilities of the belligerent rockets. Because the Dutch were operational 24/7 they had done little analysis on the rocket attacks. This forced us to do a comprehensive analysis to maximize coverage when needed. However, there were times during the operation that required more intense coverage, due to the threat. One case in point was during the Constitutional Loya Jirga when it was ordered that the radars be on full for the month. This resulted in two of the radars greatly surpassing the 750 hours that were planned for the ROTO.

Courtesy of—Combat Caméra

In addition, one radar has been broken since the first day of the deployment. To date it has used up 0.3% of its hours, and the contract will not allow for the transferring of hours from it to the other operational systems (DLR is still pursuing this). One other issue that has come up with the radar is the excessive safety distances that Ericsson has implemented to prevent litigation against the company. These distances are set out as 180 degrees parallel to the face of the antenna for a radius of 160 metres. This limits our arc that we can observe from inside a secure camp. **Observation**: The contract was built for the British on a lease-to-buy program, and is severely restrictive in providing continuous coverage in an operational environment. A more flexible program should have been developed, however, it is understood that one was intended, but the contractor proved to be too difficult in the negotiation.

The radar troop was organized based upon the organization of a British Radar troop. This troop organization was adopted, however, numbers were reduced to fit within manning limitations. Originally, this organisation was placed within the ISTAR Company, an experimental organisation trying to group everything by combat function, recce, TUAV, CBTA radar, and EW. This proved problematic, but these problems were not insurmountable. The biggest identified problem was

with the nature of orders to the radars. By the nature of doctrine, the BAIO gives direction to the radars for movement orders, emission and detection policies. By contrast, the armoured background of the command element of ISTAR coy treats these issues as commander driven. Neither position is wrong, nor right. By the nature of radars and artillery, the TACC at Bde HQ does the majority of direction to the radars. By contrast, the armoured squadron OC is leading from the front. This came to a denouement with the sensor to shooter link. In order to allow the guns to be receive timely information from the radars, the radars were switched to the fire support net. This was one step, with the next following the rocket attack on 11 Sep 03. The radars were organisationally moved to under command the gun bty. **Observation**: Rather than organise everything based upon combat function, they could be organised upon operational lines, as is the case with the radars, which allow for ease of coordination.

Despite the numerous challenges, the radar has proven to be an effective asset. Arthur in particular has proven to be a highly accurate and modern system. Under exercise conditions, we were able to locate guns firing *to an accuracy of one metre*. While located in the camps, they were a psychological morale booster to the soldiers living within the camps. The knowledge that we had these radars also provided us with the comfort that, given the right conditions, we could offer greater surveillance of an area than that provided by the human eyeball. **Observation**: Not all benefits of a system are derived purely from its capability.

The BAIO/TACC cell came into theatre with some experience in radar operations, entirely with the British Army, and based upon a wartime scenario. This deployment, although high in intensity, is a PSO. Thus it was a challenge to develop SOPs to fit the situation. Many of the wartime orders, directions and reports still worked, however, there were still some that required a complete overhaul. This involved, for example, if a sustained attack was detected against a camp. This procedure in particular involved SOP development with the FSCC, ASCC, TACC, ISTAR CC, JOC and the commander. While this worked, it took place during the first two months of the tour, allowing two months of less than ideal conditions. **Observation**: Comprehensive SOPs could have been worked out in detail prior to deployment if the ARTHUR's capability had been fully understood.

CONCLUSION

The inclusion of the TA equipment in operations has forced the hand of the CF to adapt and overcome many challenges. All the time that we are operating in Kabul, these and more lessons will be forthcoming, providing a sound framework from which we can build credible and valid TA doctrine for the future. None of the problems mentioned above have proven insurmountable, and with the natural can-do attitude of the Canadian soldier we have overcome many challenges and made more progress in five months in theatre than we would have had in five years in Canada. Many of the lessons and observations cited above are a direct result of the issue of the compressed procurement cycle witnessed prior to the deployment of these sensors. The procurement cycle did not handicap us in any way, however, these lessons and observations may be helpful for the next time we have an operational necessity that dictates a compressed purchase and employment in theatre.

THE DEVIL'S PLAYGROUND—THE AIRBORNE BATTLEFIELD IN WORLD WAR II

Colonel B. Horn

Airborne forces, from their inception, have always generated an emotional debate in regard to their value. Many argued they were merely overly-specialized and therefore too expensive, if not pampered infantry who brought little of substance to justify their drain of scarce resources, specifically aircraft and manpower. Not surprisingly, advocates underlined their strategic importance. Moreover, they highlighted the fact that airborne soldiers operated in a completely different environment that required only the best a nation could provide. There are "very special dangers that are a combat paratrooper's particular lot," recounted General Matthew B. Ridgway, wartime commander of the 82nd Airborne Division. "The quick leap out of the plane into the buffeting prop wash," he explained, "the slow float down, hanging helpless in the harness, the drop into the darkness where armed enemies wait behind every bush and tree."[1] Similarly, Major-General Richard Gale, Commander 1 British Airborne Corps, insisted that the paratrooper "is aware, too that once on the ground his future lies in his own skill. The gun which he carried down in his drop and the small supply of ammunition on his person are his only weapons for support in either attack or defense. His water and food are what he can carry when he jumps. His sense of direction, his field-craft and map-reading, and his physical strength must all be of a high order. He may be alone for hours, he may be injured, and he may be dazed from his fall. But it is his battle and he knows it."[2]

Airborne detractors quickly countered that parachuting was just another way to the battlefield. But they were wrong. The circumstances and environment that paratroopers found themselves in were very distinct from their brethren in the infantry or other combat arms. It is for this reason that airborne soldiers were specially selected based on mental and physical stamina, as well as resiliency. It was also why their training was just that much more grueling.[3] The airborne battlefield was distinct. It was demanding, unforgiving and unrelenting. Only intrepid, resilient and self-reliant individuals could survive in the devil's cauldron.

The special nature of the airborne battlefield was derived directly from the missions and roles that were assigned to airborne forces.[4] Not surprisingly, the Allies, relative latecomers to this new type of warfare, demonstrated an evolution in doctrine. As late as 1941, official thought on the subject was somewhat rudimentary and simplistic. Airborne operations were visualized in two forms: major operations that pertained to "the employment of airborne troops at one point for the capture of an objective of the first importance"; and minor operations that entailed the employment of small numbers of airborne troops "against headquarters, dumps, convoys etc., and for sabotage."[5] The failure to realize the strategic value of airborne forces was evident in the early thinking. Their employment centered on small tactical objectives. This was reinforced by doctrinal publications. Drawing lessons from the employment of parachutists up to 1942, the *Canadian Army Training Memorandum* summarized the Allied thought to that point. The objectives for paratroops were given as: "the destruction of bridges; cutting and tapping of telephone wires; incendiarism and the destruction of public utility enterprises; firing on troops, supply columns and refugees to create confusion and panic; indication of bombing targets; spreading false new; seizing and holding certain main objectives, e.g. an aerodrome; and sabotage generally."[6]

A maturation of thought quickly developed with experience. The U.S. War Department's 1942 Strategy Book clearly expounded the new importance placed on airborne forces. "Nowadays," wrote the American strategists, "one cannot possibly hope to succeed in landing operations unless one can be assured of the cooperation of parachutists on a scale hitherto undreamed of." Paratroopers were regarded "as the pivot of success of the entire operation."[7] By 1943, doctrine writers determined three major functions for airborne forces to fulfil. The first was in close cooperation with large forces in conjunction with an attack of all arms operating by land, sea or air or a combination of all three. In this capacity airborne troops were expected to attack the enemy rear and, thus, assist with the breakthrough of the main forces. In addition, they were also expected to delay enemy reserves by holding defiles between them and the battlefield or conversely to delay a retreating enemy until the main force arrived to ensure the complete destruction of the withdrawing hostile force. In addition, paratroops were also deemed capable of capturing enemy airfields to assist with the air superiority battle, creating diversions and capturing or destroying belligerent headquarters that would lead to the paralyzation of the enemy's capability of providing a cohesive defense.

The second major function of airborne forces was working independently as units or formations. Strategists envisioned paratroopers capturing islands or areas not strongly defended or capable of being reinforced, as well as positions that could seriously embarrass the enemy and prevent his reserves from being used elsewhere. In addition, the seizure of vital installations, such as oil refineries, were also seen as viable targets for independent action, as were centers of government-the loss of which would cause severe confusion. Planners also visualized the use of paratroops to assist guerilla forces by providing a nucleus of trained soldiers. Overall, within this function airborne forces were seen as fulfilling the role of an economy of effort force by pinning belligerent resources down or creating a situation by which the enemy would be required to invest a large amount of equipment and manpower to ensure the security of his rear areas.

The third and final function was that of a harassing role, operating in small numbers and often at a distance from the area of major operations. Paratroops employed in this role were responsible for harassing communications and destroying aircraft, transport, signal stations, railway trains, locks, bridges and factories. In addition, they would also be tasked with the destruction of enemy fuel, supplies and equipment, as well causing panic among the civil population by the dissemination of false information.[8]

That was the theory. But as always, it is the front line soldier who most accurately describes his actual mission. "The paratroops," asserted Lieutenant-Colonel G.F. Bradbrooke, Commanding Officer of the 1st Canadian Parachute Battalion, "are the tip of the spear." He explained that "they must expect to go in first, to penetrate behind enemy lines and to fight in isolated positions."[9] Major-General Richard Gale explained to his officers their role in a similarly simple fashion. "In almost every case," he extolled, "Airborne Forces will lead the way and be the spearhead of the attack." He further elaborated, "The sort of tasks you may have to do are: capture a position in the rear of the enemy, cut his communications, and isolate him from his reinforcements; attack the enemy in the rear, while our main forces attack his front; capture airfields in enemy country; assist sea or river crossings by making a bridgehead; [and / or] raid special objectives."[10]

The aforementioned missions and tasks of airborne forces paint a formidable picture, namely one of shock troops that are first into battle and often alone to absorb the enemy's retaliatory

strikes. More ominously yet, there are major limitations that detract from the ability of airborne forces to achieve success which make their battleground that much more difficult. The first glaring weakness was the vulnerability of the aerial armada in flight. The lumbering transport planes, as well as the aircraft towing gliders behind them, were slow and inviting targets to both anti-aircraft fire and enemy fighters. As a result, control of the entire "air corridor" was crucial and demanded air supremacy or, at a minimum, local air superiority along the entire route.

But this was only the first requirement. The next challenge lay in the accuracy of the drop itself. Even if the laden aircraft reached their destination the ability to drop their troops on target was another hurdle that was never easily surmounted. There were just too many factors against an accurate release. Inexperienced and poorly trained aircrews often resulted in the inability to maintain aircraft formation, the release of paratroopers at too high an altitude or at too great a speed. During the invasion of Sicily in July 1943, the Allied paratroopers were to be dropped from 600 feet with the C-47 Dakota aircraft slowing down to almost stalling speed-100 miles per hour. But this is where theory and practice diverged. Instead, the troopers were flung out at 1,500 feet with the aircraft racing along at nearly their top speed of 200 miles per hour. This, added to navigational problems and heavy winds, resulted in 3,405 American paratroopers being scattered over a width of 60 miles in southeast Sicily.[11] For the first few hours of the landing, Colonel James Gavin, a Regimental Commander in the 82nd Airborne Division, found himself in enemy territory with a force of only 19 of his soldiers.[12] He later estimated that only 12 %, or about 425 of the 3,405 men, actually landed somewhere in front of the beachhead as planned.[13] Similarly, of 144 aircraft that left Africa carrying the 504th Parachute Infantry Regiment, 23 never returned, 37 had major damage and half the planes required major repairs before they could fly again. Twenty-four hours after the drop Colonel Reuben Tucker, the Regimental Commander, could account for only a quarter of the 2000 men who had left Africa.[14] In addition, during the same operation, only 27 of an intended force of 200 British paratroopers (or 14 %) landed within proximity to reach their objective and fight for the Ponte Grande.[15] Almost a year later in Normandy, of the 6,600 men of the American 101st Airborne Division that dropped in the early hours of D-Day, 3,500 were still missing by the end of the day.[16] Moreover, on 15 August 1944, 5,000 Allied paratroopers of the 1st Airborne Task Force dropped in the area of Le Muy, in Southern France, as part of OperationDRAGOON. Once again, accuracy of insertion was lacking. Approximately 60 % of the American and 40 % of the British paratroopers landed too far from their drop zones (DZ) to be considered by Army analysts as constituting a successful drop.[17]

Inexperienced or poorly trained aircrews were not the only challenge. Flak and enemy air activity often caused pilots to take evasive action that created enormous difficulties for airborne soldiers and inherently resulted in missed drop zones. "As we approached the DZ the aircraft took violent evasive moves," recalled nineteen year old paratroop Bill Lovatt, "as I approached the door I was flung back violently to the opposite side of the aircraft in a tangle of arms and legs."[18] Simple navigation errors compounded problems as did high winds or poor weather. When any of these factors, or worse yet, any combination of factors were present the likelihood of a successful parachute assault was severely taxed. On the evening of 24 September 1943, during the Russian Dnieper River offensive, Soviet pilots panicked when they reached the front lines and began to receive heavy anti-aircraft fire. As a result, the drops were widely dispersed and off target. Of the 4,575 paratroopers and 666 cargo containers dropped, a total of 2,017 men (or 44 %) and 590 cargo containers (89 %) failed to reach their intended DZ. German

reports accounted for downing only three aircraft and one glider from a total of 296 sorties flown. This low kill rate strongly indicates that Soviet pilots over reacted and failed to push onto their objectives.[19] But it was not only Soviet pilots who reacted in such a manner. American Captain Richard Todd conceded that on D-Day "we lost a number of people over the sea from evasive action who fell out."[20] Sergeant John Feduck was slightly more fortunate. "Before the light changed the plane suddenly lurched," he remembered, "I couldn't hang on because there was nothing to hang on to so out I went—there was no getting back in."[21] Luckily, he was over the coast of France when the pilot's actions caused his early descent. Similarly, the disastrous drop of 1,200 German paratroopers under the command of Baron von der Heydte in December 1944 also occurred because of inexperienced pilots and aircrew, who were unable to maintain course or formation due to enemy fire. They released their Fallschirmjaeger over such a large area that only a tiny fraction of the force was able to regroup. The resultant team was too small to effect its mission of cutting off American reinforcements that were sent south from Belgium to relieve the pressure created by the surprise German offensive in the Ardennes.[22]

Despite the daunting challenges of flight, there are further impediments to the efficacy of airborne soldiers once on the ground. Initially, paratroops are extremely vulnerable on landing. Individual soldiers, weapon systems, radios and other mission essential equipment must all be brought together at a Rendezvous Point (RV) so that the proper concentration of force and command and control can be exercised. This takes time—how much time depends on the success, specifically the accuracy, of the drop itself.[23] The greater the dispersion, the greater the time to regroup to assemble combat power. Obviously, there is a direct correlation between time needed to assemble and the degree of surprise and shock action achieved. "The hardest part of the job wasn't the fighting, although that was hard enough at times," conceded Lieutenant-Colonel Bradbrooke, "but getting ourselves organized after we hit the DZ."[24] The location of the drop in relation to the enemy's position also has a dramatic effect. A British Royal Artillery Officer serving at Heraklion in Crete in May 1941 observed:

> Those [Fallschirmjaeger] dropped on the central sector fell right on top of my gun position, with the result that my small party of 25 men had to deal with vastly superior numbers of parachutists. However, they did more than deal with them; they almost completely destroyed them. If an immediate attack can be made on parachute troops the second they leave the plane and touch the ground, they are almost powerless to resist.[25]

Up until the end of the war, Army planners accepted that one-third of the force that set out would fail to intervene effectively in operations.[26]

The vulnerability of airborne soldiers on landing was further exacerbated by their lack of mobility. Once on the ground, paratroopers were limited to how far and how fast they could move with what they had. This restricted the objectives and missions that could be assigned and failure to recognize this had dire consequences. A degree of the failure to quickly capture the bridge at Arnhem in September 1944 was due to the fact that drops were made too far from the actual objective. This criticism was substantiated by the German defenders who acknowledged that they had time to mobilize their defence and respond to the threat.[27]

Yet another major limitation faced by paratroopers was their lack of firepower. Since they normally dropped behind enemy lines they were often beyond the range of friendly fire support

assets such as artillery or naval gunfire. Therefore, all they could depend only on that what they themselves could successfully bring to the "party." As a result, sheer logistics negated many heavy weapons. Loss and damage due to bad drops increased the problem. "With the planes not slowing up below 125 or 135 miles an hour," complained one veteran of the Tagaytay Ridge mission in the Phillippines in February 1945, "most of us experienced the hardest physical opening shock in our lives. The result of the shock was that most of us lost helmets, packs broke free from web belts, suspenders broke, and in the wind which was 20 to 30 miles an hour . . . many had hard landings."[28] But, bruises and scrapes aside, it was the loss of equipment that was most sorely felt. Not surprisingly, paratroopers lamented that "in the difficult weeks that followed D Day [6 June 1944], when attacks by enemy infantry and sometimes tanks and self-propelled guns had to be met with an inferior weight of fire power."[29] A little more than three months later at Arnhem, the 82nd Airborne Division was unable to communicate with their superior headquarters 15 miles away because both of their large radio sets were damaged in the drop.[30]

The last major limitation to airborne operations was that of sustainability. All airborne operations depended on eventual linkup with ground forces and was generally recognized that this had to occur within 48-72 hours.[31] Normally, air drops were used if linkup between airborne and ground forces could not be achieved. However, resupply drops suffered from the same limitations already noted and an inherent requirement for accuracy. Nonetheless, airborne elements have been able to hold out for great lengths of time even when surrounded by superior forces. Large Soviet airborne formations operated behind German lines for periods of four to six months during the winter of 1941-1942, as part of the battle of Moscow. Furthermore, the Allies held out for a period of eight days in Holland during Operation MARKET GARDEN in September 1944—four times longer than expected. Both cases involved vicious close quarter combat, including battle against armoured units. Equally, at the end of both engagements, the respective parachute units were severely mauled and virtually ceased to exist.[32]

The myriad of limitations, however, are offset by the array of capabilities that are inherent in airborne forces. These strengths eclipse the weaknesses and make the use of paratroopers inescapable. They also provide the airborne soldiers with an edge in their fight for survival in their distinctive battlefield. The greatest advantage paratroops bestow is their strategic mobility. Army planners described them as "highly mobile shock troops which can be projected at short notice into an enemy area which might otherwise consider itself immune from attack." Quite simply, a large number of paratroopers and equipment can be deployed quickly over large distances, over difficult terrain and obstacles. Moreover, they are the only ones who are capable of, on short notice, engaging in combat operations without the prerequisite of secure airfields, ports, beaches or other points of entry. Strategically employed, they can seize ground and fortifications critical to manoeuvre, hitherto thought impregnable. On 10 May 1940, a paltry 55 German parachute engineers rendered the key Belgian fortress of Eban Emael guarding the strategic Albert Canal with its 1200 man garrison ineffective.[33] Additionally, a group of 129 Fallschirmjaeger landed near Vroenhoven to capture that key bridge. Within minutes the Belgian garrison was overwhelmed and the bridge disarmed of explosives. Thirty minutes later, the bridge was open to German panzers.[34] Approximately a year later, Fallschirmjaeger seized the Corinth Canal in Greece, thus capturing approximately 10,000 Allied soldiers at a cost of 63 killed and 174 wounded.[35]

The strategic mobility inherent in airborne operations in turn creates yet another set of capabilities that create tangible combat multipliers, namely surprise and psychological dislocation. Surprise creates confusion, fear and panic in both the military and public at large. Moreover, the mere threat of attack by airborne forces necessitates costly counter measures. More importantly still, it nurtures fear in the minds of the besieged—a comprehension that even rear areas are no longer safe. Examples abound. The German landings in Holland in 1940, caused a wave of panic throughout Europe, as well as in England. "One thing is certain," wrote Captain F.O. Miksche, "there was a parachute obsession everywhere. Everybody saw them being dropped, Everybody was suspect, and even Allied officers and men, sometimes bearing important orders, were arrested by the French military authorities."[36] In Britain, troop dispositions were tailored to counter a perceived airborne invasion and vast amounts of scarce material were invested to this end. The government adopted a policy in 1940 to safeguard the country by ordering all open spaces (meaning virtually every park and playing field) throughout Britain to be seeded with long spiked poles, concrete blocks and other obstacles that would impede paratroopers.[37]

The threat of an airborne invasion later reversed itself and the Axis forces felt the resultant insecurity. The attack on the Tragino aqueduct in Italy on 10 February 1942, by a small group of parachutists caused minimal physical damage or dislocation. Nonetheless, it had far reaching implications. The Italians had been so unnerved by this operation that they diverted valuable manpower and resources in its aftermath for the protection of every vital point in the country.[38] The Bruneval Raid on the coast of France a little more than two weeks later, also conducted by British paratroopers, was more significant. This raiding force secured elements of the German Wurzburg Radar that proved significant for British radar development and electronic counter measures.[39] But on a larger tactical level, the threat and actual execution of large-scale airborne assaults created great problems for the German high command. During the invasion of Sicily in 1943, the German 6th Army Headquarters received panicky reports that paratroopers were dropping all over the southern part of the island. This paralysed their ability to respond in a coherent and decisive manner. The scale of confusion was evident by the Radio Rome broadcast that reported that 60,000 to 120,000 paratroopers had jumped into Sicily—instead of the approximate 7,300 Allied parachutists and glidermen that assaulted over a two-day period.[40] And finally, less than a year later, in the spring of 1944, Field Marshal Erwin Rommel specifically adapted his plan for the defence of the Normandy Coast to allow for the defence against airborne soldiers. As a result, valuable troops were siphoned away from front line duty and positioned in the Contentin Peninsula primarily to provide protection against airborne assault.[41]

Remarkably, the ability of airborne operations to inflict surprise and psychological disruption was so great that even small scale drops or those by a nearly vanquished enemy still caused consternation and panic. In December of 1944, the ill-executed German parachute operation during the Ardennes offensive set off a parachutist scare that was felt all the way in Paris. The Supreme Allied Commander, General Dwight D. Eisenhower became a virtual prisoner in his own headquarters.[42] It is the fear engendered by the sudden appearance of enemy troops in one's rear area and the inability to fully define their objectives that creates a decisive advantage for the invading force. Often, as already shown, inaccurate reports delivered by alarmed commanders, particularly when describing widely dispersed drops creates an impression of massive, wide-scale airborne operations threatening large areas of territory. This in turn paralyses enemy response because of an inherent attempt by the enemy leadership to

determine where the major threat lies before committing forces. In September 1944, during Operation MARKET GARDEN, Colonel-General Kurt Student acknowledged that "I could not tell what was happening or where these airborne units were going."[43] The paratroopers must quickly regroup prior to carrying on with their mission, but the defender must try and determine what has happened, how many have landed, where, what is their objective and who is available to counter the alleged attack. "It is a unique characteristic of airborne operations," insisted German commanders, "that the moment of greatest weakness of the attacker and of the defender occur simultaneously. The issue is decided by three factors, who has better nerves, who takes the initiative first, and who acts with the greatest determination."[44]

In sum, despite severe limitations, it is the promise of overwhelming success due to the enormous capabilities of the third dimension of war that make paratroopers such a valuable asset to any fighting force. However, their use, although promising high value pay off, is also high risk. And so, within this context the individual airborne soldier must go to battle. His challenges are great. For him, parachuting is more than just another means of getting to the battlefield. His struggle starts long before he closes with the enemy. Paratroopers normally arrive tired and exhausted. They endured the process of dressing and waiting fully kitted for long periods of time. It was not uncommon for individuals to be weighted down with 100 pounds of equipment not including their parachute assembly. Aircrewman Martin Wolfe recalled pushing paratroopers with up to 125 pounds of gear into his aircraft. "With our gear," asserted Colonel Ivan Hershner, "the average man weighed about 300 pounds that night [6 June 1944]."[45] The exhausting weight was in itself not the only hurdle to overcome. Its effect on the actual jump was enormous. "I got a good opening, tore a few sections in my chute, which was not unusual when you were loaded up with equipment," recalled Edward J. Cole of his drop onto Tagaytay Ridge in February 1945. "[I] reached up to grab my risers and hit the ground," he explained, "I didn't have a chance to release my jump rope...we had jumped at about 450 feet with full equipment."[46] With the enormous weight and low jump altitude, the descent was rather quick. This was common.

However, once dressed the salvation of shedding the uncomfortable parachute harness and heavy equipment on the drop zone was but a glimmer in the distant future. First, the ordeal of flight to the destination had to be overcome. Bucking, lurching aircraft that were tossed about in the wash of previous air planes, as well as the attempts to avoid flak, created additional stress for the paratrooper. Research has shown that airsickness due to turbulent flying conditions in itself creates fatigue. Compounded by anxiety and tension, as well as the heavy loads carried by each airborne soldier, the state of enervation on landing was substantial.[47]

But the exhaustion, as well as the numerous abrasions and bruises, if not more serious injuries such as sprains or fractures had to be quickly put aside. The battle on the ground now began and ordinarily the paratrooper was the first to fight. His mission behind enemy lines placed him in direct contact with the enemy before he was often fully prepared. The airborne insertion of the Poles at Arnhem in September 1944, resulted in them being placed directly into a raging battle. As a result, they were fired on by both sides.[48] To exacerbate the airborne soldiers' plight, once the drone of the aircraft engines disappeared the paratroopers were normally on their own. They had no rear, no sanctuary to return to, and no pipeline connected to ships or friendly lines. "A parachutist fights a lonely battle," argued British Lieutenant-General Sir Michael Gray. "He has no real front or rear," he explained, "He often feels he is fighting the battle on his own."[29] Brigadier James Hill, Commander of the British 3rd Parachute Brigade

during the Normandy invasion understood the potential confusion that his paratroopers would face. "Gentlemen, in spite of your excellent training and orders," he proclaimed, "do not be daunted if chaos reigns. It undoubtably will."[30] His words were prophetic. Drops were widely dispersed and scattered and units were faced with the task of completing their missions under strength and lacking important equipment.

Within this devil's cauldron it is not surprising that airborne soldiers suffered a higher ratio of casualties than other combat troops. "Jumping out of airplanes was romantic as hell," critiqued one detractor, "but also dangerous and wasteful of lives; what it did was put a very high premium on bravery of a certain kind."[49] The requirement for courage was no understatement. Casualty statistics tell a tale all of their own. Of 2000 German airborne troops (22nd Infantry Division—airlanding) assigned to the capture of the Hague in the Netherlands on 10 May 1940, 40 % of the officers and 28 % of the men were killed.[50] Similarly, that same day, the Fallschirmjaeger that attacked the Belgian fortress of Eban Emael suffered 30 % casualties.[51] Almost a year later, German paratroopers suffered 58 % casualties during their invasion of Crete, a full 25 % of the participants being killed.[52] "We paid dearly for our victory," Adolf Strauch concluded, "Every third man killed, every second man wounded. Our victory was no victory."[53]

And the bloody trend continued. The British parachute commando action at Tragino, Italy, cost them the loss of a 100 % of the raiding force.[54] The Soviet paratroopers suffered 71 % casualties during their desperate battles around Vyazma / Moscow during the winter of January to March 1942. The German Waffen SS Paratroop Battalion suffered 62 % casualties in its raid on Tito's headquarters in Yugoslavia in May 1944[55] and approximately 80 % of the British 1st Airborne Division was lost during Operation MARKET GARDEN in September that same year.[56] Finally, the 82nd Airborne Division incurred 27 % casualties in Sicily and 46 % in Normandy.[57] In November 1944, then Major-General Ridgway, Commander XVIII Corps (Airborne), conceded in a letter to General George Marshall, Chief of Staff of the United States Army, that "At the moment of entry into action, an airborne division has already suffered losses far in excess of those of an infantry division at a similar time, through misplaced drops and crash injuries, both of which are in addition to normal battle casualties."[58] In the overall American experience of World War II, over 30 % of all airborne personnel became casualties. This compares to only 10 % among regular infantry formations.[59]

It becomes easy to understand why the airborne battlefield exacts a higher price. It is a unique battleground, one where the situation is never clear, where a paratrooper has no distinct starting position and often, if not normally, finds himself, at least initially, totally alone, deep in enemy territory. It is an environment where one is never fully sure who or how many will actually arrive on the objective in time to assist in the battle. To survive in these ambiguous, hostile surroundings requires a special character—an exceptional type of combat soldier. Neither rank, nor position, hold privilege as all must share the hardships and dangers of flight and a parachute descent onto an unknown DZ. During the assault on Sicily, many gliders crashed into the Mediterranean Sea. One survivor clinging to the wreckage of his stricken aircraft was British Major-General Hoppy Hopkinson, Commander of the1st Airborne Division.[60] During the invasion of Normandy, the first battalion, 501st Parachute Infantry Regiment was not only badly scattered, but it also had its commanding officer killed, the battalion second in command captured and all four company commanders missing.[61] "The scattering had an operating influence on the whole battle," disclosed paratroop veteran Dan Hartigan. "We lost

more than 50% of our officers on D-Day," he revealed, "15 of 27 I believe."[62] The potential loss of leadership necessitated that all airborne soldiers be prepared to carry on the mission themselves. "When its [airborne division] people hit the ground," declared General Matthew Ridgway, "they are individuals, and a two-star general and a Pfc. [private] are on exactly the same basis." He further explained that "you have no communications whatsoever for some little time, particularly when you have jumped at night. You don't know where you are. You don't know who's around you, friend or foe."[63] Without question the airborne battlefield was an arena that required an aggressive individual with courage, initiative and tenacity, as well as mental alertness and exemplary combat skills. Paratroopers had to be capable of adapting to unforseen situations and above all else they had to be self-reliant. It is for this reason that special selection processes and tough, rigorous training were implemented. In the end, the formidable entrance requirement and gruelling training designed to weed out all but the fittest and most aggressive, combined with their unrivalled battlefield performance, created a distinct airborne mentality and philosophy—no mission too daunting, no challenge too great.

The public image of the paratrooper also added to the mystique. The complex and dangerous nature of the operations required what was described as an "elite" type of soldier. Most people, both civilian and military, believed that airborne soldiers had nerves of steel and that they were in superb physical condition so that they could withstand the shock of the jump and the hard landings.[64] "In the first place, they [parachutists] are perfect specimens," wrote Larry Gough from the American *Liberty* magazine. "They have to be," he explained, "because their work is rough tough and full of excellent opportunities to get hurt. Mentally they're quick on the trigger, again because their job demands it, because split seconds can make the difference between instant death or a successfully completed job."[65] A Canadian account was equally dramatic. "Picture men with muscles of iron dropping in parachutes, hanging precariously from slender ropes, braced for any kind of action, bullets whistling about them from below and above," portrayed one journalist. He elaborated further:

> They congregate or scatter. Some are shot. But the others go on with the job. Perhaps they're to dynamite an objective. Perhaps they're to infiltrate through enemy lines and bring about the disorder necessary to break up the foe's defence, where-upon their comrades out in front can break through. Or perhaps they're to do reconnoitering and get back the best way they can. But whatever they're sent out to do, they'll do it, these toughest men who ever wore khaki.[66]

Quite frankly, the public, as well as military commanders, believed that airborne soldiers were the cutting edge of operations—tough, intelligent and self-reliant shock troops dropping from the sky to paralyse and demoralize the enemy. "It builds our morale, it stiffens the spine and braces the backbone of the public," insisted Lieutenant-General E.M. Flanagan, "to hear talk about the independent type airborne operation." He elaborated that this was born from the image of an airborne army storming-in "to deal a lethal blow to the enemy, deep in his backyard."[67] Brigadier James Hill simply described parachute troops as the best fighting material in the world. He felt that "the parachutists have shown themselves magnificent infantry, pre-eminent in physique and steadiness of nerve, born guerilla fighters, mobile and tireless, tremendous marchers, and of an undefeated spirit."[68] Brigadier-General Ridgley Gaither from the Army War College, after a tour of the European theatre of operation, reported "That there are no better fighting troops in the theater is evidenced by the wholesome respect accorded these unit by all other combat troops. With a high esprit de corps and morale second to none

they firmly believe they are unbeatable."[69] It is for this reason that Colonel James Gavin, wartime commander of the 82nd Airborne Division, later wrote that "the term American parachutist has become synonymous with courage of the highest order."[70] Even George C. Marshall, the American Army Chief of Staff declared that "the courage and dash of airborne troops has become a by-word and is a great inspiration to all others."[71] Finally, Field Marshall Bernard Law Montgomery adjudged that "when the maroon beret is seen on the battlefield it at once inspires confidence, as it is well known that its wearers are good men and true and have the highest standards in all things."[72]

But these accolades were well earned. Paratroopers proved themselves as aggressive, resilient and tenacious fighters capable of overcoming adversity. "When tracer bullets began ripping through his canopy, Private Edwin C. Raub became so enraged that he deliberately side-slipped his chute so as to land next to the anti-aircraft gun. Without removing his harness, and dragging his parachute behind him, Raub rushed the Germans with his Tommy gun. He killed one, captured the others and then, with plastic explosives destroyed the flak-gun barrels."[73] In another example of tenacity over adversity, Sergeant Bullock, from the British 9th Parachute Battalion and a handful of others were dropped almost thirty miles inland. They reported to their units four days later with evidence to show that they had killed numerous enemy, including twenty senior German generals of Brigadier rank or higher. Another paratrooper swam twenty miles down the Orne River to reach Pegasus Bridge.3131 Yet, another example of the airborne spirit that has since entered into legend is the infamous incident of Captain Eric Mackay relaying his CO's refusal at Arnhem to surrender despite the fact they were cut off, completely surrounded and had suffered horrendous casualties. "Get the hell out of here," he yelled at the German Waffen SS soldier who had come forward to offer terms, "We're not taking any prisoners."[74]

In the final summation, the prowess of airborne forces lay in the requirement and their ability to transcend the brutality and unforgiving nature of the airborne battlefield. "The mainspring of these forces," insisted the renowned American soldier and military historian S.L.A. Marshall, "lay in the spirit of the men. They moved and hit like light infantry and what they achieved in surprise more than compensated for what they lacked in fire power."[75] Brigadier-General Gathier observed that "the individual parachute soldier in combat is completely self-reliant and able to operate on his own. He is a killer and imbued with a desire to close with the enemy and destroy him."[76] Military historian Clay Blair agreed. He wrote that the 82nd Airborne Division emerged from Normandy with the reputation of being "a pack of jackals; the toughest, most resourceful and bloodthirsty infantry in the ETO."[77] This was not a peculiar American outlook. British Major-General Richard Gale came to the same conclusion. "In the end," he extolled, "it all boils down to the individual and it is he that counts. Be alert, be vigilant and be resourceful. What you get by stealth and by guts you must hold with skill and determination."[78]

But it was their ability to overcome their daunting environment that set them apart. "Their duty lies in the van of the battle; they are proud of this honour and have never failed in any task," wrote Field Marshall Montgomery. "They have the highest standards in all things . . . [and] they have shown themselves to be as tenacious and determined in defence as they are courageous in attack." They are, he concluded, "men apart—every man an Emperor."[79]

And so, the claim that parachuting was just another means of getting to the battlefield betrayed an ignorance to the disconcerting and exacting airborne battlefield. It failed to account for an

environment that is ambiguous, chaotic and seldom predictable. Only those hardened to adversity, resilient to the stress of the unknown and capable of adapting to ever changing circumstances could survive in the devil's cauldron that was the airborne battlefield.

About the Author ...

Colonel Bernd Horn joined the CF in May 1983 in Kitchener, Ontario. He has an Honours BA in Political Science from the University of Waterloo, and an MA and PhD in War Studies from the Royal Military College of Canada. He is currently the Director of the Canadian Forces Leadership Institute and an adjunct associate professor at RMC. He has authored, co-authored, edited and co-edited twelve books and numerous articles on military affairs and history.

ENDNOTES

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2. Lieutenant-General Richard Gale, *With the 6th Airborne Division in Normandy* (London: Sampson Low, Marston & CO., 1948), 2-3.
3. The Director of Military Training stated "That due to the fact that this type of work requires unusual stamina and mental attitude by personnel, parachute battalions must be considered as elite units. Therefore, in the early formative period of such a corps, volunteers should be selected who by reason of physical and mental standards and previous Military training are most likely to be able to succeed in this unnatural and difficult work." Memorandum, DMT to DCGS (B), 30 October 1942, "1 Cdn Parachute Battalion," LAC, Microfilm C-8379, File: HQS 8846-7, No. 1, 2. The development of a distinct attitude and culture was noted early on in regards to the development of the American airborne forces. Major-General Lesley McNair, Commander of U.S. Army Ground Forces, remarked at a press conference in Washington, D.C. in 1942, "They [paratroopers] are our problem children. They make lots of money, and they know they're good. This makes them a little temperamental, but they're great soldiers." William Breuer, *Geronimo*, (New York: St. Martin's Press, 1990), 9.
4. Airborne troops include all those carried by air to battle whether parachute troops or air landing troops. Parachute troops are trained and equipped to land by parachute and air landing troops are those that land by either aircraft or glider. CIGS, *Airborne Operations, Pamphlet No. 1, General—1943* (London: War Office, 1943), 1.
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9. Ronald A. Keith, "Sky Troops," *Maclean's*, (1 August 1943): 19.
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17. Blair, 314.
18. David Owen, "A Portrait of a Parachutist," unpublished manuscript, 1 Cdn Para Bn Assn Archives.
19. Richard Armstrong, "The Bukrin Drop: Limits to Creativity," *Military Affairs*, July 1986, 130. See also David Glantz, *The Soviet Airborne Experience* (Fort Leavenworth: U.S Army Command and General Staff College, 1984), 124 and *The History of Soviet Airborne Forces* (Portland: Frank Cass & Company, 1994), as well as Steven Zaloga, *Inside the Blue Berets* (Novato: Presidio Press, 1995), 99-116.
20. Stephen E. Ambrose, *Pegasus Bridge* (London: Touchstone Books, 1985), 109.
21. Interview Sergeant John Feduck with Michel Wyczynski, 19 December 2001.
22. Centre of Military History, *Airborne Operations—A German Appraisal* (Washington D.C.: U.S. Govt Printing Office, 1989), 21; John Toland, *Battle—The Story of the Bulge* (New York: Random House, 1959), 40-44; Michael Reynolds, *The Devil's Adjutant* (New York: Sarpedon, 1995), 67-68. Air Chief Marshal Sir John C. Slessor made reference to the drop in a most uncomplimentary manner describing it as "the fiasco of Heydt's single ill-fated battalion's [drop] during the Ardennes offensive." Taken from an article "Some Reflection of Airborne Forces," *Army Quarterly 1948*. Canadian Department of National Defence (DND) Department of History and Heritage (DHH) files.
23. Centre of Military History, *Airborne Operations—A German Appraisal*, 28.

24. Ralph Allen, "Canadian Paratroops Create Proud History," *Globe and Mail*, No. 29,495, 26 June 1944, 1 and 3, National Library of Canada (NL) Microfilm N-20057.
25. "How to Deal with Parachute Troops," CATM No. 17, August 1942, para 96.
26. WD/HF/180/1/A Div Comd's Directive 26.1.42 contained in "The Airborne Forces 1940-1943," UK, Public Record Office (PRO), CAB 101 /220, 25.
27. Much of the blame has been levelled at Major-General Roy Urquhart who was appointed Division Commander with no prior airborne experience. He made the fateful decision to go with DZ locations between 5-8 miles from the objective, distances contrary to airborne doctrine. He preferred good DZs at a distance compared to bad DZs close to the objective. He later admitted this was an unnecessary and fatal error. It cost the division the advantage of surprise and forced it to divide its forces to maintain DZ security for follow on operations. John Warren, *Airborne Operations in WWII*, European Theatre (Kansas: USAF Historical Division, Air University, 1956), 149.
28. Flanagan, 247.
29. DND Historical Section, *The 1st Can Para Bn In France, 6 June-6 September 1944, Report 26*, 23 August 1949, 7. DHH and CAFM files.
30. Cornelius Ryan, *A Bridge Too Far* (London: Touchstone Books, 1995), 244.
31. This time frame became the doctrinal framework that was used during the establishment of the British Airborne Division in 1941. Extracts from "Memorandum on the Organization and Employment of the Airborne Division, by Major-General F.A.M. Browning, D.S.O., Commander, The Airborne Division." DHH and CAFM files.
32. Ryan, 599.
33. James Lucas, *Storming Eagles. German Airborne Forces in World War II* (London: Cassell, 2001), 42-47; and Volkmar Kuhn, *German Paratroops in World War II* (London: Ian Allan Ltd, 1978), 33-40.
34. James E. Mrazek, *The Fall of Eben Emael* (Novato, CA: Presidio, 1970), 138.
35. Lucas, 75 and Kuhn, 52-55.
36. Captain F.O. Miksche, *Paratroops* (London: Faber and Faber Ltd, 1942), 38-39.
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39. David Eshel, *Daring to Win* (London: Arms and Armour Press, 1992), 33-34.
40. Breuer, *Drop Zone Sicily*, 113.
41. F.H. Hinsley, *British Intelligence in the Second World War, Vol 3, Part II* (New York: Cambridge University Press, 1988), 797. The units which were brought in specially from Germany were: 101 Werfer Regt, 206 Panzer Bn, 70 Army Assault Bn, 17 MG Bn, 100 Panzer Training Bn.
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46. Flanagan, 256.
47. J.A. Easterbrook, *Fatigue in Mobile Striking Force Parachutists, JSORT Memorandum No. 55/8* (Ottawa: DND Joint Services Operational Research Team, 1955), 1-8.
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51. Mrazek, 164.
52. Eric Morris, *Guerillas in Uniform* (London: Hutchinson, 1989), 45-46; Brigadier M.A.J. Tugwell, "Day of the Paratroops," *Military Review*, Vol 57, No.3,(March 1977): 48; and Centre of Military History, *Airborne Operations—A German Appraisal* (Washington D.C.: US Government Printing Office, 1989), 21-23. Another account reported German casualties at 44% and aircraft losses at 170 out of 530 operation (32%). Blair, 29.
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54. Hilary St. George Saunders, *The Green Beret. The Story of the Commandos 1940-1945* (London: Michael Joseph, 1949), 193; and Lieutenant-Colonel Robert D. Burhans, *The First Special Service Force. A History of The North Americans 1942-1944* (Toronto: Methuen, 1975), 162.
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56. F.H. Hinsley, *British Intelligence in the Second World War, Vol 3, Part II* (NewYork: Cambridge University Press, 1988), 382-389.
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59. Kurt Gabel, *The Making of a Paratrooper* (Lawrence: University Press of Kansas, 1990), 268.
60. Breuer, *Drop Zone Sicily*, 43.
61. Crookenden, 101.
62. Dan Hartigan, interview with Bernd Horn, 30 October 2000.

63. Ridgway, 7.
64. Blair, 27. See also Saunders, 317. General-Leutnant Bruno Brauer, who commanded a German parachute regiment during the invasion of the Low Countries in 1940, captured the essence of the 'airborne' allure. Parachuting, he said, "compresses into the space of seconds feelings of concentrated energy, tenseness and abandon; it alone demands a continual and unconditional readiness to risk one's life. Therefore the parachutist experiences the most exalted feelings of which human beings are capable, namely that of victory over one's self." Brauer concluded, "for us parachutists, the words of the poet, who said that unless you stake your life you will never win it, is no empty phrase." Maurice Newnham, "Parachute Soldiers," *RUSI*, Vol 65, No. 580, (November 1950): 592.
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66. "Assembling Paratroopers At Calgary," *Globe and Mail*, Vol XCIX, No. 28916, 18 (August 1942): 13, NL, Microfilm N-20035.
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68. "3rd Parachute Brigade—Training Instruction No. 3," 23 July 1943, 2 & 6. Canadian Forces Director of History and Heritage 145.4036 (D1). American Major-General A.S. Newman believed that parachuting proves the "will to dare." He further elaborated that "Parachute jumping tests and hardens a soldier under stress in a way nothing short of battle can do. You never know about others. But paratroopers will fight. You can bet on that. They repeatedly face danger while jumping and develop self-discipline that conquers fear. Subconsciously every trooper knows this. That's why he has that extra cocky confidence." (Major-General A.S. Newman, *What Are Generals Made Of?* (Novato, CA: Presidio, 1987), 197. Similarly, another American, Major-General Willard Pearson declared, "If you want to select a group of people who are willing to fight, well, one of the best criteria I know is whether or not they will jump out of an airplane. Now that is not to say that some of the others won't fight, but sure as hell the airborne will." Ward Just, *Military Men* (New York: Alfred A. Knopf, 1970), 130.
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72. "Ad unum omnes," hand-out given to British and Canadian officers serving under Major-General Richard Gale during World War II. CAFM, File AB 21.
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75. S.L.A. Marshall, *The Soldier's Load and the Mobility of a Nation* (Quantico: The Marine Corps Association, 1950), 16.
76. Brigadier Ridgley Gaither, Headquarters Army Ground Forces, Army War College, "Observer's Report, Airborne Operations, European Theater of Operations," 19 April 1945. CAFM, Airborne Font, Vol 2, File 36.
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THE E-FORCES!
THE EVOLUTION OF BATTLE-GROUPINGS[1] IN THE FACE OF 21ST CENTURY CHALLENGES.

Major J.C.A.E. Dion

INTRODUCTION AND SCOPE

Information age technologies have caused a revolution in military affairs (RMA)—the claim is almost trite. One needs only to read the newspapers, listen to the radio, watch television or travel to realize, however, that there has been no corresponding revolution in the human heart or in human affairs. Military and civilian strategists alike must attend to this paradox, for from it springs an important distinction—the difference between the conduct of war and the nature of war. The conduct and nature of war are different: the former is ever changing, while the latter is not. Furthermore, the difference has important practical consequences.[2] The key is to develop a way of fighting that is agile enough to adapt to adversaries and antagonists who will do everything in their power to neutralize our technological advantage.[3] In asymmetric warfare, we must try to stay ahead of potential attackers.[4] Seizing the initiative will be critical and of strategic importance. The Canadian Forces' (CF's) Vision 2020 states that:

> We will exploit leading-edge doctrine and technologies to accomplish our domestic and international roles in the battle space of the 21st Century and be recognized, both at home and abroad, as an innovative, relevant knowledge-based institution. Indeed, with transformational leadership and coherent management, we will build upon our proud heritage in the pursuit of clear strategic objectives.[5]

In keeping with the stated vision of our Army as being knowledge-based, command-centric and soldier-focused, we intend to present herein an evolutionary vision of battle-groupings into expeditionary type task forces by 2020. Based on our soldiers, these evolutionary and expeditionary e-forces would constitute our greatest weapon.[6]

"Natural selection has been defined as a process that promotes the survival of species that are able to adapt to changes in their environment. While it is normally discussed in scientific circles, natural selection has its place in the military environment, as well."[7]

An RMA has purportedly been underway for a number of years in modern armies. This revolution is characterized partially by advances in modern technology, particularly in the field of information management and electronics. It is now possible to provide more information to commanders on friendly forces' dispositions and on most any other issue on which we care to collect information. In addition, it is possible to build precision weapons that can be directed to pinpoint targets from most weapons platforms, even using cell phones. It has stimulated many of the Western armed forces to undertake transformation programs, which typically embody changes to technology, doctrine and the way armies and individual forces approach war and military operations. Canada is no exception.[8] Our proud Army must embrace technological change, doctrinal innovation and organizational adaptation. Moreover, political and societal expectations, fed by an ever-voracious media, demand quick, sterile operations that inflict the minimum number of friendly, civilian and even enemy casualties. There is a growing expectation

that military operations can be accomplished in short order and with virtually zero tolerance for error.[9] We are also faced with a fundamental transformation in which the traditional boundaries associated with security and defence have blurred. In fact, in many ways, they have now merged. The challenge for all of us is how to best position the CF to not only defend Canada and its interests but also to safeguard the global security and prosperity of all Canadians in a time of unprecedented change.[10] Information systems and new business processes can help the Army according to Lt Gen John Riggs, Director of the US Army Objective Force Task Force,[11] but integration is key. In this very sense, how best can our Army integrate new information technology capabilities? How can we learn, apply and evolve from new e-business concepts and best practices to increase our Army's efficiency in operations? How should we structure, indoctrinate, train and equip our Army to face these challenges? Can we afford to plug and play in the RMA digitized battlefield? Can we afford not to?

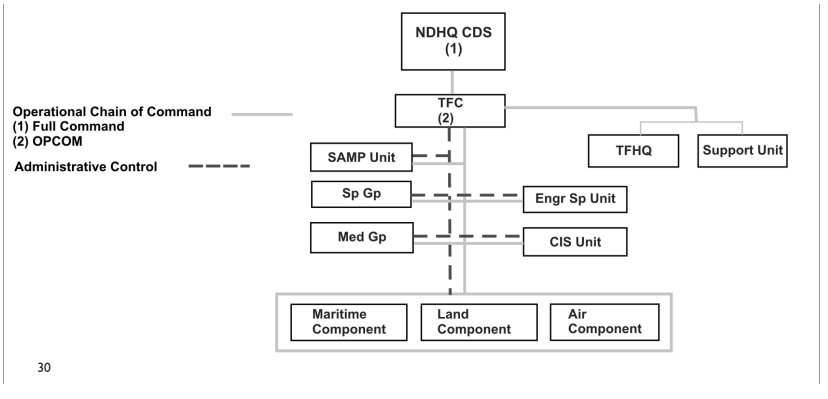
FUTURE ENVIRONMENT

"Today's world is without precedent," cautioned French military analyst Phillippe Delmas. "It is as different from the Cold War as it is from the Middle Ages, so the past offers no basis for comparison."[12] Therefore, although it is impractical to paint a future scenario with any degree of precision, it is, however, possible to describe characteristics that are likely to shape the future battlefield and our ability to operate on it.[13] Namely, particular and complex operations such as those in urban terrain and the premises of the three-block wars portray a very daunting future environment, as demonstrated by its study.[14] Asymmetry, for example, is not designed at its core to win battlefield victory; rather, its aim is to disrupt, distract, disconnect or, in short, to wear down a normally superior opponent.[15] In a recent study on unrestricted warfare, two Chinese strategists have warned, "There is no means which cannot be used in war in the future and there is no territory or method which cannot be used in combination."[16] Such is the future security environment in which our soldiers may very well be involved in combat operations, peace support operations and humanitarian operations all simultaneously and all taking place within three blocks.[17] To function in this daunting environment will require a reorientation of how we think and operate on the battlefield.[18] As Sir Michael Howard stated in 1973, "It is flexibility in mind and organization that needs above all to be developed in peacetime," thus fostering adaptability which will provide advantage in wartime. Faced with the modern challenges of this future security environment, decentralized decision-making powers and enlightened lower-level leaders capable of making reasoned, timely decisions under pressure and working with the principles of mission command and Auftragstaktik[19] are what will determine success or failure.[20] By seeking to detect, disrupt and defeat any type of adversary, antagonist or enemy on any ground or dimension of our choosing, we will seize the initiative, which has already become a major key to success. Only by leveraging new emerging technologies in every field, including information, will our Army be in a posture to provide the tools our soldiers require to do the best job. And in order to fully leverage new and emerging technologies, our Army must fully integrate. Therefore, the Army must be or become adaptable in contingency planning, considering the allocation of different force packages (or task forces) relevant to specific scenarios.[21]

TASK FORCES

In some ways, allied efforts to promote joint doctrine are designed to match the capabilities of the CF's integrated and unified system. Although we need to better integrate all services and arms into task forces, we already possess a structural advantage over our allies. However, our joint and inter-agency cultures must still evolve and we must see beyond our cap badges. Like

the Navy, the Army must stand ready to offer Canadians a wide range of options and task-tailored joint and integrated response packages for the protection of Canada and the global system upon which we depend.[22] For the Forces to effectively defend Canada's interests, combined doctrine is, in fact, more important than joint doctrine[23] (combined being any military operation which involves the forces of more than one nation acting together to accomplish a single mission).[24] The current CF joint operations doctrine focuses on the operational level of force employment. It is where emphasis is placed on the synergistic integration of CF commands and agencies so that their total effort can be concentrated decisively to achieve the commander's mission.[25] To facilitate future task organization, the Army's force structure should remain modular in design and include: sub-units, as the basic, homogeneous and unbreakable module to execute specific ranges of tasks within a unit framework; units, as the core integrator of sub-units, with their command and control (C2), and combat service support (CSS) modules, capable of rapidly integrating new elements within the unit; and formations, task-tailored and organized for specific missions, with a far broader range of capabilities than today's formations, integration of all attached units and sub-units within C2 and CSS structures being critical.[26] Our Army must be structured for domestic and expeditionary missions and be capable of selected tasks across the entire spectrum of conflict. To achieve this strategic relevance, it must be knowledge-based, sustainable and tactically decisive.[27] As such, organizing our forces for the different tasks at hand is probably the most suitable avenue considering the limited assets we possess. Tactical decisiveness, as part of any joint team, will come from a flexible organizational structure that will enable forces to be tailored to the mission and will include components of all five operational functions. Our center of gravity will then become our virtual access to a multitude of weapons platforms, while mission command and manoeuvre warfare will remain the bedrocks around which these changes will take place.[28] Various modular sub-units would then also become the basic construct of our future forces and would be specialized to accomplish specific tasks or functions within larger units or formations. For example, an intelligence, surveillance, target acquisition and reconnaissance (ISTAR) sqn would sense, e-fantry coys, mobile gun systems (MGS) sqns and all fires btys would act, sustained by a national support element (NSE) coy or ship and commanded by a joint, maybe inter-agency and possibly virtual "reach back" NCE or HQ, and shielded by a nuclear, biological, chemical (NBC) coy, unmanned aerial vehicle (UAV) and air and helo flights. In retrospect, our current regimental structure and system lends itself rather hardly to flexible task organizing, and our culture is intimately tied in with this traditional structure based on the 1914-18 paradigms. Ninety years later, we need to rethink whether regiments, as they are known today,[29] are still viable and if their respected structure is not hindering our evolution by promoting old ways.



INTEGRATED CULTURE

The introduction of new technological capabilities has always posed a challenge to existent doctrine and to the contemporary understanding of warfare. From a historical perspective, digitization provides us with an unprecedented opportunity to break down the stovepipe information structures that have characterized armies throughout the ages.[31] Like the period that preceded and followed the turn of the 20th Century, we face today an era where technology developed for the civil sector is having considerable impact on military development. The implications for national defence and security are broad. Paramount is the opportunity the information revolution offers for a high degree of integration among all agencies responsible for enhancing security internationally and nationally.[32] The expanded, more lethal, technologically dependent battle space creates the final characteristic of the future realm of conflict-interdependent operations. At this time, the ability to conduct effective joint operations (those involving two or more armed services of a single country) has been the immediate goal. This entails the ability to plan and conduct Bluetooth[33] operations in a seamless manner, with integrated command structures, interoperable communications and information systems, along with common doctrine and procedures.[34] Milnet for example, would be a secure intranet used for allied military/security strategic, operational and tactical purposes, which would allow layers of e-business type applications to run securely, providing military connectivity and global communications, enhancing coordination and collaboration and accelerating distribution of military and security information. Ultimately, faced with the future security environment and new inter-agency doctrine, our forces will need to integrate at a much lower level with agencies and allies. In this very sense, through the advancement of joint, inter-agency, multinational and knowledge-based concepts and doctrine, the CF will employ an agile, adaptable and modular force to conduct integrated operations across the spectrum of conflict.[35] As such, the most likely threshold could very well be our organizational adaptability, our ability to integrate all our structures and cultures, both vertically and horizontally, along with technology. In other words, we need to become interoperable within, with our allies and other agencies not only systematically but also and foremost in the sense of adopting a corporate culture. Political acumen and a clear understanding of the national interest and policy will be key. Therefore, mastering the strategic art of war will require close, co-operative, interdepartmental relations, leaders, both military and civilian, with vision to see over and beyond bureaucratic barriers.[36] More to the point, the key to the success of digitization will not paradoxically be technology; it will be our willingness to evolve our doctrine in order to employ the technology to its maximum effectiveness.[37]

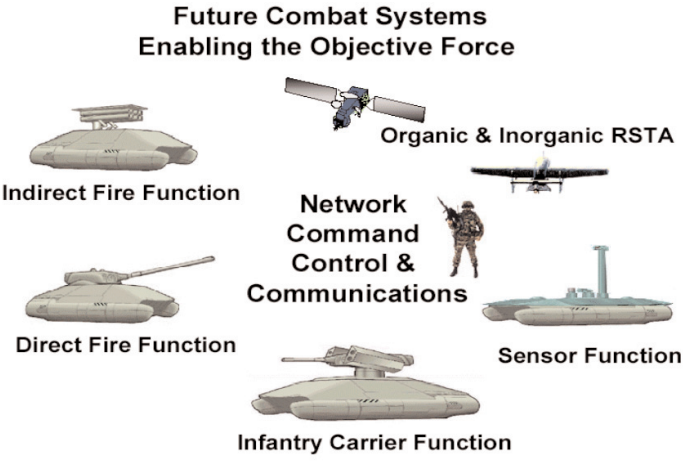
EVOLVED DOCTRINE

Few competent military or political decision-makers would argue that the status quo is acceptable. The vacuum created in the wake of the former Cold War has been filled with instability, conflict and seemingly continual change. The Canadian Army, like its allied counterparts throughout the world, must evolve if it is to remain a strategically relevant institution.[38] Technology enables doctrine and structures, allowing the creation of new capabilities or the enhancement of old ones. Selective acquisition and adaptation of technology is fundamental to the creation of the Future Army, but it must be aligned to the requirements of the future combined land forces and battle space.[39] In almost every case, technologies are applied first in an attempt to improve the prevailing method of fighting. Then, once the full

capabilities of new technologies are fully grasped, new methods of fighting emerge. Often these new methods then produce new organizations and training requirements as well as new demands on military leaders.[40] Although this approach has long been characterized by the historical evolution in military affairs, analysis of the modern RMA[41] and of the Future Security Environment study[42] recognize that the Army must commit its resources toward revolutionary rather than evolutionary increases in capability. "Future war," predicts the former US Marine Corps Commandant, General Charles Krulak, "is most likely not the son of Desert Storm ('90); rather, it will be the stepchild of Somalia and Chechnya."[43] With open minds, we must begin to think of new operational concepts leading to an evolved doctrine. As such, the American approach towards pre-emptive operations[44] may well become an imperative. All dimensions, for example, pre-emptive humanitarian operations, must be considered. Carl von Clausewitz stated that a nation's ability to successfully wage war is dependent on the synergistic relationships among the populace, the military and the government. Indeed, the failures of the UN intervention, or lack of it, in Rwanda, have prompted civil society debates about the right, the obligation or the will of our nations to even intervene in such circumstances, transcending today's international conventions and legal framework.[45] This increased political pressure will have direct impact on future operations conducted unilaterally or not by our nation in the defence of its global national interests. In light of these upcoming strategic realities, the expeditionary option seems to be the most viable one presented to date to better adapt our Army, both structurally and culturally, to face the challenges of the 21st Century. Our enemies should no longer count on our traditional reluctance to use force before being attacked or on our passivity in front of events on CNN.

DIGITAL MANOEUVRE

As has stated Michael Porter, Harvard University business professor, "The question is not whether to deploy technology, but how to deploy it."[46] The concept of manoeuvre warfare is eminently suited to an army that is well trained, highly educated and willing to take risks.[47] Manoeuvre, tied to situational awareness and virtual access to lethal weapons effects, will become dominant—access through digitization. The size of forces will become less relevant, with quality becoming a key factor over quantity. Elements of forces will disperse and join back together as the operational situation dictates. Their ability to call on precision weapons and provide accurate target designation at all times will be the critical key to operational and strategic success.[48] Continual technological advancements will enable land forces to manoeuvre while acquiring and engaging targets more rapidly, at greater ranges, with more precise effects and greater lethality than ever before. The greatly improved ability to locate and identify targets, accurately assess their capabilities and engage them in a timely manner will enable the employment of much smaller, more agile, adaptable networked sub-units that can be dispersed over greater distances and still have greatly reduced logistical support needs. This diffusion of force, protected through access to real-time information and precision weapons rather than being dependant on mass and firepower as in the past, will allow for simultaneous (asynchronous) operations throughout the battle space.[49] There will obviously be an increased emphasis on information operations and small, agile, dispersed elements that are much more aware of the situation operating in a non-linear environment and supported by instantaneously delivered precision-effects weaponry.[50] Digitization—the application of information technology for the acquisition, processing and distribution of digital information to enhance situational awareness and operational effectiveness[51]—will be key to our battle edge in this new and future



security environment, while manoeuvre and mission command will be the bedrocks around these strategic change.[52] IT infrastructure in the private sector already links many workstations, networks, servers, cell phones, personal devices, vehicles and even numerous partners.[53] Precisely because information has become key to multidimensional warfare, our Army should also leverage the underlying efficiencies that will inevitably be provided by IT. This can only be done once we have accepted and managed change in order to integrate.

EXPEDITIONARY NATURE

With the publication of the *London Declaration* in July 1990, NATO initiated a process of transformation in response to important fundamental changes in the European security environment. Thus, a new Alliance strategic concept was developed, which takes a much broader approach to political stability and security to include the maintenance of smaller force structures at much lower readiness levels, featuring enhanced mobility, flexibility and multi nationality.[54] The UN is also shifting to a broader human security paradigm.[55] To a great extent, structure is not fixed but rather is shaped to a considerable degree by the choices we made. Since Canada's deployment to Somalia in early 1992, our Army has constantly deployed battalion groups to almost every theatre of operations—with the notable exceptions of Timor, Eritrea and South-West Asia, where joint task forces were deployed—with Army components being either company groups or again battle groups.[56] In other circumstances, such as operations in Kosovo, Macedonia and Haïti, task-tailored forces were deployed, sometimes comprising as few as one pers, up to sub-units part of JTF-2. However, it appears quite obviously that there ought to be no more pre-determined force packages for pre-determined problems in pre-determined situations; adaptability is key. Canadian Army Vision 2020 recognizes two operational imperatives: the first is that our Army, as an expeditionary force, must be capable of rapid, strategic deployment and must possess the combat capabilities necessary to be tactically decisive in either View 1 or View 2 operations; underpinning the first operational imperative is the second, our military ethos—the human qualities of professionalism, dedication and courage—which serve to define our Canadian Army.[57] Land forces must provide relevant and significant tactical capabilities including: enhanced manoeuvre forces with improved close range firepower (including beyond line-of-sight capability) integrated with advanced extended range firepower elements, which possess precision attack

capability; comprehensive sensing and analysis capabilities; the ability to shield committed land forces from enemy threats; effective sustainment; and advanced command capabilities. In developing these tactical capabilities, our Army must recognize the need to have its expeditionary e-forces capable of either independent operations within a joint national framework or effective integration within a coalition formation.[58] Expeditionary forces must be able to achieve decisive tactical success in all operations. Therefore, they must be organized, resourced, equipped, indoctrinated and trained to be strategically relevant, tactically decisive, deployable, agile, versatile, lethal, survivable and sustainable across the full spectrum of operations. These e-forces will operate within the framework of a joint and combined force, in which they will lead many joint tactical forces, often as part of a coalition force, and, at all levels of command, operate with non-military partners and agencies. These e-forces will comprise agile, modular organizations, whose leaders are adaptive for prompt and sustained, joint, interdepartmental and multinational operations in complex environments.[59] In creating expeditionary and evolutionary forces, it should be possible and preferable to blend a number of approaches into our Army's e-forces structure without exceeding the available resources. Theoretical doctrinal discussion, operational research and recent practical experience all support the need for a robust, flexible force structure. Technology is expected to soon provide massive improvements in current capabilities in order to make Canada's expeditionary forces easier to deploy and significantly more effective than they presently are. In any case, we should maintain a broad range of operational and support sub-units, tailored as the situation dictates into task forces, a balanced Army being indeed more relevant.[60] As such, a renewed operational culture and focus are necessary to develop an expeditionary modular type of structure most flexible to all contingencies, with an edge.

INFORMATION EDGE

The visualization, high-performance computing and networking technologies initially developed for the simulation and training market are now being applied to C2 systems of systems to help commanders make decisions faster.[61] This new information technology, sensor capability and output, coupled with full-spectrum connectivity, will provide an abundance (perhaps even an overload) of information that will need to be filtered and processed in a timely manner. This may well become the most daunting challenge for commanders of the future: to cull the important bits of information from the massive waves of clutter that will continually flood them.[62] A commander's awareness of the situation is achieved through the processing of data into information, information into knowledge and knowledge into understanding. Processing various data into information includes filtering, fusing, formatting, organizing, collating, correlating, plotting, maybe translating, categorizing and arranging data in such a way as to give it meaning.[63] One of the defining characteristics of many of the new concepts we are beginning to embrace is the use of information and knowledge to create situational awareness and understanding. This will be achieved by enhanced situational awareness made possible by global C2 and the emerging ISTAR capabilities.[64] These, in turn, will allow for a far greater integration of combat systems and capabilities over much greater distances, creating unprecedented combat powers. The changing nature of the gathering, processing and employment of information in decision-making and execution of operations is perhaps the single most important advance to affect military operations in the near future.[65] The concept of data/information being sent simultaneously to several level headquarters will have to be incorporated into procedures. This concept will streamline our information flow and will be consistent with increasing horizontal integration across the force.[66] The most significant impacts will come from advances in information systems and knowledge management. Maintaining currency with these advances

will be quite a significant challenge, but such currency will be vital for interoperability with our allies. Developments in these areas will require new command and control paradigms based on a higher degree of delegation to seize the initiative in a flatter command structure.[67] One important area that needs to be much more aggressively addressed is creating the capability to rapidly move information about the battlefield situation, the status of stocks and supplies and personnel, for example, directly to the appropriate individuals and organizations in the Army, says Lt Gen John Riggs, Director of the US Army Objective Force Task Force. This involves the application of information technologies but maybe more importantly, requires changes in processes for collecting and disseminating that information.[68] Integration of information from new sensor systems and from all intelligence sources through knowledge management will provide an order of magnitude improvement in situational awareness and enhance the quality of decision-making. This will significantly enhance the precision of operations by facilitating the appropriate application of military force and expertise to the situation at hand, eventually taking into account a multitude of subjective political and diplomatic considerations.[69]

CONCLUSION

In essence, the need will be for networked, adaptable, superbly trained and educated, highly mobile, well-equipped e-forces capable of rapid deployment on complex, joint, multi-dimensional independent, inter-agency and/or coalition operations. These e-forces must be capable of conducting selected missions and many tasks across the spectrum of conflict.[70] To this aim, capability and effects must be completely embedded into one command and culture. The continued existence of ponderous chains of command and unwieldy protocols and staff will be tantamount to failure. Equally, any inability to ensure connectivity and accurate situational awareness of all friendly forces will be so deadly.[71] The gravest danger our nation faces lies at the crossroads of radicalism and technology[72]. New procurement and technology development initiatives are needed to ensure that fast moving technologies can be quickly developed to maintain the capability of in-service platforms and systems through tech-insertion, thereby guarding against obsolescence[73]. And as it has already been recommended that the USMC Marine Expeditionary Unit model be introduced in the Canadian Army / CF to satisfy the requirements of a special operations capability for the 21st Century,[74] we would argue, in fact, that our whole Army needs to adopt an expeditionary and evolutionary posture structurally, by shifting to task-tailored forces, and culturally, by adopting a renewed operational focus based on our ethos. In fact, as the Summary of Duty with Honour states, the overriding purpose of Canada's profession of arms is the conduct of military operations. And faced with the challenges of the 21st Century, we must integrate all stakeholders into these e-forces. Canada's Army in the 21st Century will continue to depend on soldiers and leaders with the military ethos, values and skills to prevail in the ambiguous and violent situations they will face. Fortunately, the strength of Canada's Army has always been and remains well-trained, well-educated, highly professional soldiers and leaders organized in cohesive and robust fighting teams.[75] We owe them the proper structure and culture. Therefore, the Army must consider the future security environment and the nature of conflict in 2020 in order to select and integrate new capabilities within new doctrine and new structure.[76] We may be fooled by changes in the conduct of war, such as the ongoing RMA and the information revolution, but in essence, the nature of war remains brutal, the violent prolongation of politics and the fog and the friction it is known by, according to Clausewitz. In conclusion, what will be needed are adaptable, highly trained and highly educated, highly mobile, well-equipped e-forces packages capable of rapid deployment on complex multi-dimensional joint and coalition operations and able to conduct tasks and missions across the entire spectrum of conflict.[77] In this sense, the most suitable avenue for our

Canadian Army lies in its evolution into expeditionary "e-forces" and its parallel adaptation structurally and culturally to face the tremendous challenges of the 21st Century.

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FORCE OF CHOICE: THE EVOLUTION OF SPECIAL OPERATIONS FORCES CAPABILITY

Colonel B. Horn

INTRODUCTION

The terrorist attack on the twin towers of the World Trade Center in New York on 11 September 2001 (9/11) remains vivid in the collective memory. In the aftermath of that tragic event, the United States of America (USA) embarked on a war against terrorism that continues to this day. Of note, was the immediate and principal reliance on special operations forces (SOF), which have been traditionally defined as forces that are "specially selected, specially trained, specially equipped, and given special missions and support."[1] Although this reliance should not be surprising, based on their ability to respond to the ambiguous, elusive and asymmetric nature of the threat, it was.

This is understandable as SOF have often, if not almost always, been the black sheep of the military family. They were created largely in the chaos of the Second World War, when the Allies were devoid of the ability or means to strike back at the seemingly invincible German military machine as a result of years of doctrinal stagnation, unpreparedness, limited resources and catastrophic initial defeats. As such, small specialized operations forces became the primary tool for limited offensive action. However, the image of SOF that developed was that of the tough, hardened killer commandos and desperate cutthroats capable of violence and efficient killing, but virtually uncontrollable and lacking any sense of military decorum. Moreover, their operations were judged by many conventional commanders to be resource intensive, yet without any substantive value to the larger war effort.

Despite the opposition, SOF were established and provided tangible results. In essence, they were born from crisis and filled a specific void. They enabled the Allies, particularly the British, to operate offensively from a position of weakness as an economy of effort weapon. They maintained a spirit of offensiveness, tied down German resources and bought time for the beleaguered conventional forces to regroup, re-equip and retrain. However, as the tide of the war shifted so did their support, as feeble as it was. Raiding and direct action were soon eclipsed by the less glamorous tasks of unconventional warfare and strategic reconnaissance.[2] As the large conventional forces achieved a foothold in the respective theatres of operation, SOF were largely ignored or utilized incorrectly at great cost in lives. Predictably, SOF units were largely disbanded by the end of the war.

The post war era was no more friendly to SOF. They were consistently marginalized until a specific need arose, at which time they were directed to fill the particular void. Even then, they failed to be embraced by the larger institution. As such, SOF was orientated towards unconventional warfare and counter-insurgency in the Cold War, especially as a result of the savage wars of peace in the 1950s to early 1970s. The Vietnam War, in particular, witnessed an exponential increase in American special operations units as they attempted to find methods of defeating an elusive enemy in a hostile and complex environment. Subsequently, as a result of the new circumstances of the 1970s and 1980s, counter-terrorism became the next shift for SOF.

But legitimacy for special operations forces did not begin to solidify until the post Cold War period that generated an entirely new geo-political environment that was laden with new threats. Gone was the stability and predictability of the Cold War that was managed by two global superpowers. Instead the world became fragmented and increasingly dangerous as flash points erupted worldwide. In this volatile climate, SOF evolved once again to fill the required void. Their specialization, small organizational footprint and ability to conduct missions that fell into the grey area of political/military operations that are normally politically sensitive expanded their utility. The evolution of SOF was matched by the maturation of their definition. SOF became delineated as organizations that are "Specially organized, trained and equipped military and paramilitary forces that conduct special operations to achieve military, political, economic or informational objectives by generally unconventional means in hostile, denied or politically sensitive areas."[3] As such, the culmination of the evolution of SOF and its ultimate legitimacy became evident with the reliance on SOF in the aftermath of 9/11. It became clear that they had completed their transformation from a force of desperation to a force of choice.

EVOLUTION OF SPECIAL OPERATIONS FORCES

Special operations forces are a relatively recent phenomena, having been forged in the furnace of World War II. It was the tenacious efforts of the combative British prime minister, Winston Churchill, who refused to accept a "defensive" war despite the looming threat of invasion in 1940, that resulted in the birth of commandos.[4] These hand-picked volunteers—who demonstrated courage, endurance, initiative and resourcefulness as well as self-reliance and aggressiveness—were expected to capture strong points, destroy enemy services, neutralize coastal batteries and wipe out any designated enemy force through raiding operations.[5]

Their standards were unrelenting. Individuals who failed to meet the requisite training requirements were immediately returned to their original units. In the end, despite a slow start and relatively short history, commando raids were successful and achieved their aim. They not only raised public morale, but they also forged a record for perseverance and toughness as well as tactical and, at times, arguably, strategic success.[6] Equally important in the process, the ground was prepared for the birth, if not near explosion, of modern special operations forces. The idea of specially organized and specially trained units, made up of intrepid individuals who revelled in challenging and highly dangerous small unit action that called for innovation, individualism and independent action became more widely accepted, or at least tolerated, in an institution known for its conservatism and traditionalism. However, this limited, if not conditional, acceptance existed largely only at the beginning of the war. During this chaotic period of despair, a few desperate men were able to fill a void—an ability to strike out from a position of seeming impotence. And so, special units were raised to cover for weakness as well as to meet specific needs that conventional forces were seen as too unwieldy or poorly trained to accomplish.

As such, a myriad of other relatively small raiding and reconnaissance units—such as the Long Range Desert Group (LRDG), the Special Air Service (SAS), the American Rangers, Phantom, Layforce, the First Special Service Force (FSSF), Popski's Private Army, the Special Boat Service and a plethora of others—emerged to prop up the war effort until larger, conventional forces could crush the German war machine. As the tide of the war shifted, so too did the emphasis on SOF. Direct action raids were marginalized, and strategic reconnaissance and unconventional warfare, conducted by the Office of Strategic Services (OSS), the Special Operations Executive (SOE) and the SAS, gained in relative importance. Nonetheless, once the large conventional

armies were established in Europe, particularly after the Normandy campaign, SOF overall were ignored, forgotten and relegated to the status of a nuisance to "real soldiering."

However, the post war era did not provide the war weary and debt-ridden governments or their publics with a prolonged period of peace and tranquility. The onset of the Cold War necessitated for Western nations the creation of large peacetime standing armies. It also established the spectre of two large heavily armed camps facing off in Europe. The fact that the seemingly aggressive and very belligerent Soviet Union maintained a buffer of occupied territories and peoples between itself and the West clearly presented an opportunity for unconventional warfare. This was not lost on strategic planners and commanders, particularly those with recent OSS and SOE experience, and, as a result, SOF capability was once again mobilized to fill this specialized requirement. As such, the evolutionary process begun in World War II from a primary focus on direct action raids towards strategic reconnaissance and unconventional warfare continued.

The British and American examples provide a case in point. The SAS was transformed into a Territorial Army unit, the 21st SAS Regiment (Artists).[7] Their role was to provide lay-back patrols that would stay hidden as the Soviet forces swept by and then report on enemy movements and troop concentrations. The Americans resurrected their SOF capability in the same direction-strategic reconnaissance and unconventional warfare. In April 1952, the US Army created the Psychological Warfare Center, at Fort Bragg, North Carolina, the name of which was later changed to the Special Warfare Center. At roughly the same time, the 10th Special Forces Group (SFG) was activated. The following year the bulk of the 10th SFG was deployed to Bad Tolz, West Germany, and the soldiers that were left behind in Fort Bragg were reorganized into a new unit, the 77th SFG.[8]

For the troops of the 10th SFG—the officers of which were largely drawn from World War II SOF organizations such as the OSS, Rangers and airborne units—their mission in Europe was extremely sensitive and secret. They were tasked, in the event of the expected Soviet invasion, with developing and exploiting the resistance potential of the population in those areas behind the enemy lines, namely the Soviet occupied territories. In addition, the Special Forces (SF) teams were also responsible to conduct reconnaissance and potential sabotage missions on their own as well. In essence, the teams were expected to train and advise resistance movements in the art of guerilla warfare as well as conduct strategic reconnaissance to locate Soviet headquarters and nuclear weapon installations.[9] But this European focus, set in the context of a high-intensity conventional war akin to that of World War II, was somewhat misplaced. The nature of conflict would take on a different face.

During the Cold War, wars of nationalism and communist insurgency (two concepts that were often not always properly delineated by the West) ushered in a period often referred to as the savage wars of peace. Once again, the complex nature of such conflicts—which were of long duration, which required political and not simply military solutions, and which were normally conducted in complex terrain that provided cover, concealment and protection for the less heavily armed and equipped insurgents—overwhelmed the conventional capability. The regular soldier was often unaccustomed to operating in hostile environments for prolonged periods of time. In addition, they had neither the training nor the innovative adaptable tactics or methodology of thought to counter and defeat elusive, wily insurgents.

To the British, this became evident during the Malaya Emergency from 1947 to 1960. The immediate unwieldy, unsophisticated and limited response of conventional forces failed to

destroy the guerillas or increase the level of security within the country. Although they succeeded in killing some insurgents, they just as often alienated segments of the population through heavy-handedness. But more importantly, the regular forces were incapable of operating in the austere and hostile jungles for any length of time. As a result, they failed to deny sanctuary and breeding grounds to the guerillas. Fortuitously, a recognized expert, Major "Mad" Mike Calvert, a former commando, Chindit battalion commander and wartime 2 SAS Brigade Commander, was summoned to investigate the problem and devise a solution. Not surprisingly, he recommended the establishment of a special unit, the Malayan Scouts (SAS), as a means to penetrate the jungle and chase down the guerillas.[10]

Their success, combined with the growing realization that SOF, when employed correctly, revealed a "comparatively low cost in lives set against results achieved," provided a new lease on life for SOF.[11] Quite simply, frugal bureaucrats realized that SOF provided an inexpensive means of waging war against insurgents in distant jungles and deserts, often largely on their own. Savings realized by replacing generic capability backed by quantity with specific skill sets reinforced by quality became an attractive option. Therefore, SOF began to evolve once again to become a force that was concentrated on unconventional warfare and counter-insurgency. For example, SOF were utilized by a myriad of nations during low level conflict in Malaya, Oman, Brunei, Borneo, Aden, Indo-China, Algeria and Chad, to name but a few.[12]

But once again, despite the arguable success of SOF during this period, they were never fully accepted by the larger institution.[13] Ironically, the very attributes that furnished SOF with their greatest strength also generated enmity from the conventional forces. The ability to respond to, and outwit, their adversaries as well as endure austere and hostile environments inherently required unconventional tactics, an independence of thought and initiative by the operators, mental agility, specialized training as well as a level of aggressiveness, fitness and general toughness that exceeded that found in regular army units. Quite simply, these were the secrets to SOF success.

However, their success continued to generate antagonism and jealousy between themselves and the conventional military. But it also produced the panacea of a silver bullet. For instance, the eventual American involvement in Vietnam witnessed another explosion of SOF-type units as a component of the American response to the escalating and complex nature of the war. As unique tasks such as unconventional warfare, long-range reconnaissance and interdiction, and riverine operations emerged in the politically restrictive and environmentally hostile theatre of operations, new units were created, or existing ones expanded exponentially, to address the requirement.

For example, the US Special Forces, or "Green Berets," were dramatically increased in size. They were initially tasked with the Strategic Hamlet Program and later became responsible for the Civil Irregular Defence Group (CIDG) program, which revolved largely around training indigenous populations in self-defence by raising local defence forces capable of defending their villages. In addition, the SF soldiers also undertook basic civil affairs programs such as improving agricultural practices, sanitation and water supply. However, they also built and occupied fortified camps, from which fighting patrols by SF and CIDG soldiers could be mounted. The CIDG program was later abused, and its personnel used to form multipurpose reaction forces and mobile strike forces in support of conventional as well as covert operations.[14]

The dramatic growth of SOF during this period was reflected in the fact that all three services were getting into the SOF business. In 1961, the Air Force redesignated existing units as "Air

Commandos" and trained them specifically for counter insurgency operations using diverse fixed-wing and rotary wing aircraft. A year later, the Navy created Sea Air Land (SEAL) teams and sent some to Vietnam, where they initially acted in an advisory role to the Vietnamese Navy but later became responsible for the interdiction of all waterway supply routes from North Vietnam and Cambodia by ambush, patrols, sabotage and mines. In addition, they were entrusted with conducting raids on Viet Cong bases and headquarters.[15]

Further SOF developments included the decision by Military Assistance Command Vietnam (MACV), in April 1964, to create the Studies and Observation Group (SOG), which was tasked with strategic reconnaissance and special operations. Specifically, they were responsible for covert cross border reconnaissance operations against the Ho Chi Minh Trail (inserting and running agents and complex deception operations in the North), psychological operations and covert maritime interdiction, capture and destruction of North Vietnamese naval craft and fishing boats.[16]

But this was only part of the expansion. In 1965, thirteen Long Range Reconnaissance Companies (LRRP) were formed. Four years later, they were collectively designated the 75th Infantry Regiment (Ranger).[17] In addition, Projects Delta, Omega and Gamma were sequential programs undertaken to create battalion-sized SOF units, comprising both US and Vietnamese personnel that were capable of long-range reconnaissance and raiding. Australian and New Zealand SAS forces were also employed in this capacity.[18] Finally, throughout the conflict, SOF organizations and ad hoc task groups were also tasked with running rescue operations, 119 in total, to rescue American prisoners of war.[19]

Unfortunately, the sudden spike in demand was met in many cases by lowering selection standards, where in fact they existed, which inevitably led to a diminution of the overall standard of individuals serving in those units. For instance, the Special Warfare Center, which on average graduated less than 400 individuals in a given year, ballooned to eight times that number. By 1962, the attrition rate, which was historically 90 percent, fell to 70 percent. Two years later it plummeted to 30 percent. Incredulously, in 1965, Special Forces accepted for the first time 6,500 first-term enlistees as well as second lieutenants! Not surprisingly, the emphasis on quality—ability, experience, maturity and skill—was ignored in favour of quantity.[20]

In theatre, the SOF culture of lax discipline, deportment and unconventional tactics, exacerbated by the type of inexperienced, and often immature, individuals who were now serving in SOF, created difficulties. Rightly or wrongly, the reputation of SOF suffered. They became viewed by the conventional military, as well as by much of the public, as largely a collection of snake-eaters, cowboys and soldiers of questionable quality who were running amok without adequate control mechanisms.

This legacy would haunt the special operators for decades, even though SOF arguably demonstrated, as they had always done, that they were in fact a force multiplier and a very economical tool. For example, between January and February 1969, SOG maintained a kill ration of almost 100:1. This compares to the conventional unit kill ratio of 15:1. Moreover, the SOG kill ratio jumped to 153:1 in 1970. Equally important, the SOG activity required the NVA to allocate approximately three full divisions (approximately 30,000 men) to rear area security. This was achieved by about 50 American SOG members and their indigenous soldiers.[21] An NVA officer later conceded that "SOG effectively attacked and weakened their forces and hurt their morale because they were unable stop the SF attacks."[22]

Nonetheless, much like the World War II experience, SOF units were still, if not increasingly, marginalized by the mainstream army. General Maxwell Taylor recalled that, despite President John F. Kennedy's urging, "not much heart went into [the] work [of placing greater emphasis on SOF]." Taylor, like many senior commanders, believed that Special Forces were not doing anything that "any well-trained unit" could not do.[23]

And so, although SOF missions had undergone an evolutionary shift, not much had changed. In the post Vietnam era, the American SOF witnessed their budgets and organizations slashed unmercifully. By the mid-1970s, the Navy was considering moving its remaining special warfare forces to the reserves, and the Air Force cut its Air Commandos, which were a separate air force during the Vietnam War, down to a few squadrons and a handful of aircraft. The Army reaction was even greater. It slashed Special Forces manning by 70 percent and their funding by 95 percent.[24] At its lowest point in 1975, the SOF budget represented one tenth of one percent of the total American defence budget.[25]

Not surprisingly, most operators, particularly officers and senior non-commissioned officers, felt that SOF employment was career limiting. Predictably, not everyone, in fact very few, saw their utility in the Cold War paradigm of "air land battle," which pitted large, heavily armoured mass formations against one another on the North European plains. Low intensity warfare and insurgencies were seen as an inconvenient nuisance that distracted the military from the real business of high intensity warfare. A classified research project in the mid-1970s titled the "Multi-Purpose Force Study: US Army Special Forces," confirmed that "...there is a pervasive lack of understanding, interest and support of unconventional warfare and Special Forces as a valid national response option."[26] Nonetheless, despite this reality, the allure of SOF still drew those individuals who were attracted to its reliance on individual initiative and adaptability as well as its unconventional methodology and tactics.

But once again, despite the overwhelming institutional prejudice, the "unexpected" forced conventional-minded military commanders to turn to SOF. A fundamental shift in the threat picture to Western industrialized nations erupted in the late 1960s to early 1970s and provided SOF with another area of specialization. Terrorism became recognized as a significant "new" menace. Bombings, kidnapping, murders and the hijacking of commercial aircraft seemingly burst outward, and not just in the Middle East. European countries were thrust into a state of violence as both home-grown and international terrorists waged a relentless war that recognized no borders or limits. Israeli targets, particularly its national airline *El-Al*, were struck at Athens, Rome, Zurich and elsewhere. Other international airlines such as Swissair, TWA, Pan Am, to name but a few, and their passengers also became victims to terrorism. The murder of Israeli athletes at the 1972 Olympics in Munich, West Germany, became one of the defining images of the crisis, as did the 1975 terrorist assault on the headquarters of OPEC in Vienna, Austria.[27] The scope of the problem was such that in the 1970s, in Italy alone, there were 11,780 terrorist attacks.[28]

But the problem went beyond a spill over of Mid-East conflict and politics. In Germany, groups such as the Baader-Meinhof gang, or Red Army Faction, created death and destruction. Holland was besieged by Moluccan terrorists, and Britain struggled with the Irish Republican Army (IRA) and the Northern Ireland question. Even in North America, terrorism raised its ugly head. The Americans saw the growth of radical groups such as the Weathermen, New World Liberation Front and Black Panther Party, to name but a few. In Canada, the *Front de Libération du Québec* (FLQ) began a reign of terror, which culminated in the October Crisis of 1970. In addition, foreign terrorists imported their political struggles and launched attacks against targets in Canada.[29]

One common theme quickly emerged: no country was immune. The terrorist threat was a global phenomenon. Whether home-grown or imported, every state required a response. That realization spawned the next major evolutionary step for SOF: to fight terrorism required specific skills that were not resident within the military institution at large. As such, SOF were once again targeted to provide the solution. And who better than specially selected individuals who were capable of agility in thought, adaptability in operations and who possessed superior martial skills? Not surprisingly, SOF were once again in demand. Predictably, new units were created or existing ones assigned new tasks. For example, the Germans established *Grenzshutzgruppe* 9 (GSG 9) in September 1972; the British assigned the counter-terrorist (CT) role to the SAS that same year; the French formed the *Groupe d'Intervention de la Gendarmerie Nationale* (GIGN) two years later; the Belgians created the *Escadron Special D'Intervention* (ESI) also in 1974; the United Stated formed its premier CT unit, the 1st Special Forces Operational Detachment (DELTA), in 1977; and the Italians raised the *Gruppo d'Intervento Speziale* (GIS) in 1978. In short, most countries developed specialist CT organizations to deal with the problem.[30]

In fact, SOF stock rose even more in May 1980. The SAS response to the seizure of the Iranian embassy at Princess Gate by the Democratic Revolutionary Movement for the Liberation of Arabistan (DRMLA) in full view of the world media brought instant respect and credibility to the organization.[31] This success, contrasted by the utter failure and humiliation of the American attempt to rescue its hostages in Iran weeks earlier, sparked a renaissance for special operations forces.[32] It became evident that SOF had a role in the turbulent new era. Although this lesson was not easily accepted by conventional military commanders, further problems with the cooperation, integration, performance and utilization of SOF in Operation URGENT FURY, the invasion of Grenada in 1983, finally broke the proverbial back of the camel. American legislators now intervened and assisted those within the military institution in breaking down the barriers that impeded SOF. US senators Sam Nunn and William Cohen, both members of the Armed Services Committee, as well as Noel Koch, Principal Deputy Assistant Secretary of Defence for International Security Affairs, were instrumental in pressing for change. After a long struggle, in 1987, Congress mandated that the President create a unified combatant command. And, on 13 April of that year, United States Special Operations Command (USSOCOM) was activated.[33]

The creation of USSOCOM provided an important benchmark in SOF evolution. The Americans, who, in the post World War II era, were normally the trend setters in military affairs—whether equipment, doctrine, organization or technology oriented—recognized SOF as an independent joint command. Special operations forces now had control over their own resources so they could better modernize their organizations. They had a single commander who could promote interoperability and ensure all SOF assets could operate effectively

together. Finally, the provision of a "four-star" commander-in-chief and an Assistant Secretary of Defence for Special Operations and Low Intensity Conflict gave SOF representation in the highest councils of the Department of Defence (DoD). Quite simply, SOF had come of age.

The universal image of SOF continued to grow. Internationally, SOF units scored repeated successes against terrorists. But of greater importance, SOF once again gained the limelight during the Gulf War in 1990-1991. Coalition SOF conducted strategic reconnaissance, direct action raids, economy of effort activities such as deception operations and liaison/training missions with the less advanced non-NATO coalition partners.34 But their most well known, public mission was "Scud busting"—a strategically essential task that was critical to maintaining the Coalition by keeping Israel from retaliating against Saddam Hussein's continued Scud missile attacks on Israeli soil. SOF were given the difficult task of locating and destroying the mobile launchers.[35]

In the end, of the 540,396 American troops deployed to Operation DESERT STORM, approximately 7,000 were SOF personnel.[36] Paradoxically, General H. "Stormin" Norman Schwarzkopf III, who actually despised special operators because of his negative experience with them in Vietnam and later in Grenada, initially refused their inclusion in his force.[37] Yet, in the end, despite his initial reluctance to use SOF, he later singled out those forces as critical to the Coalition victory.[38]

Special operations forces were now on the rise. They proved themselves effective in the murky war against terrorists, in the blowing sands of a conventional war in the Gulf as well as in the savage peace that prevailed. Globally, they were used for the traditional roles of unconventional warfare, strategic reconnaissance and direct action raids. However, they now also specialized in counter-terrorism, foreign internal defence (i.e., training foreign militaries in counter insurgency and CT), counter-proliferation (i.e., combating the proliferation of nuclear, biological and chemical weapons, intelligence collection and analysis, support of diplomacy, arms control and export controls), civic affairs, psychological operations and information operations. They were also used to hunt down war criminals in the Former Yugoslavia.[39]

Their importance increased because political decision makers and senior military commanders finally realized their true value. Quite simply, relatively small, highly skilled and mobile units that proved extremely effective in operations and presented a relatively small footprint provided the political and military leadership with a viable response. Special operations forces could be employed in a myriad of potentially politically sensitive operations but without the normally risk or negative optics of deploying a large number of troops. Mass could be replaced by quality. This was not only an economic factor but one of effectiveness. In the volatile, uncertain and ambiguous environment of conflict, SOF were normally more agile and adaptable. Their higher levels of intelligence, skill and ingenuity provided a better chance of success.[40]

Accordingly, reliance on SOF continued to grow. Their budget for fiscal year (FY) 2001 was $3.7 billion.[41] Their budget for FY 2003 was approximately $4.9 billion, an increase of 21 percent.[42] This figure increased again in 2004, to an estimated $6 billion.[43] But, despite the significant capability they represent, proven by their steadily growing operational tempo and record of success, their funding envelope still represents only about 1.3 percent of the total (DoD) budget.[44] By 2001, 5,141 SOF personnel were deployed to 149 countries and foreign territories.[45] However, this number skyrocketed in the aftermath of 9/11 and the invasion of Iraq. As of May 2003, there were approximately 20,000 special operators, representing almost half of the entire special operations force of 47,000, involved in ongoing conflicts in Afghanistan

and Iraq.[46] Moreover, US SOF are joined there by a large number of allied SOF contingents.

As such, the acceptance of SOF, particularly their utility and relevance, by the mainstream military and political decision makers has finally become pronounced in the new millennium. The tragic terrorist attack on the twin towers of the World Trade Center Towers in New York city on 11 September 2001 finalized the transformation of the perception of SOF and represented the culmination of their acceptance as a core element of any military. Faced with an elusive foe that relied on dispersion, complex terrain and asymmetric tactics, military commanders quickly realized that only a flexible, adaptive and agile response would suffice. The challenge had now become one of locating and rooting out terrorists and terrorist networks that threatened American and Western interests. It became a question of disrupting their plans, finding and killing or capturing them and driving them from their safe havens.

Special operations forces, with their organizational flexibility, rapid mobility and underlying strength of exceptionally trained personnel answered the call. They swiftly destroyed the Taliban regime in Afghanistan and severely crippled the capability of al-Qaeda.[47] Small teams utilizing precision effects with the support of indigenous forces demonstrated an effective and successful method of waging war. As the war on terror continues unabated, so too does the reliance on special operations and those who undertake them. Aggressive, intelligent, highly motivated individuals, rigorously selected, specially trained and equipped—SOF provide political and military decision makers with an expanded range of options that, although normally high risk, are also high value and capable of significant payoff.

As such, SOF provide a self-contained, versatile and unique capability, whether employed alone or complementing other forces or agencies, to attain military strategic or operational objectives. In contrast to conventional forces, SOF are generally small, precise, adaptable and innovative. As a result, they can conduct operations in a clandestine, covert or discreet manner.[48] They are capable of organizing and deploying rapidly and can gain entry to and operate in hostile or denied areas without the necessity of secured ports, airfields or road networks. In addition, they can operate in austere and harsh environments and communicate worldwide with integral equipment. Moreover, they deploy rapidly, at relatively low cost, with a low profile and have a less intrusive presence than larger conventional forces.

Although the future is not certain, SOF have seemingly evolved from a force of desperation, born in the initial crisis of World War II, to a force of choice in the aftermath of the 9/11 terrorist attack. Once marginalized and considered as a nuisance to real soldiering, special operations forces will become the workhorses of the future. They will provide decision makers with the needed political and cultural astuteness and military finesse required to succeed in an increasingly complex and chaotic world. It is for this reason that Donald Rumsfeld, the American Secretary of Defence, asserted that "in an emergency, we dial 911 and ask for Fort Bragg."[49]

About the Author ...

Colonel Bernd Horn joined the CF in May 1983 in Kitchener, Ontario. He has an Honours BA in Political Science from the University of Waterloo, and an MA and PhD in War Studies from the Royal Military College of Canada. He is currently the Director of the Canadian Forces Leadership Institute and an adjunct associate professor at RMC. He has authored, co-authored, edited and co-edited twelve books and numerous articles on military affairs and history.

END NOTES

1. Tom Clancy, *Special Forces* (New York: A Berkley Book, 2001), p. 3. See Bernd Horn, "Special Men, Special Missions; The Utility of Special Operations Forces," in Bernd Horn, Paul B. de Taillon, David Last, eds., *Force of Choice: Perspectives on Special Operations* (Kingston: McGill-Queens Press, 2004), Chapter 1, for a discussion on the myriad of definitions and perspectives on the meaning of SOF.
2. Unconventional warfare normally entails organizing, training, equipping, advising and assisting indigenous populations and surrogate forces in military and paramilitary operations of long duration.
3. Thomas K. Adams, *US Special Operations Forces in Action. The Challenge of Unconventional Warfare* (London: Frank Cass, 1998), p. 7.
4. David Jablonsky, *Churchill: The Making of a Grand Strategist* (Carlisle Barracks: Strategic Studies Institute, U.S. Army War College, 1990), p. 125; Cecil Aspinall-Oglander, Roger Keyes. *Being the Biography of Admiral of the Fleet Lord Keyes of Zeebrugge and Dover* (London: Hogarth Press, 1951), p. 380; John Terraine, *The Life and Times of Lord Mountbatten* (London: Arrow Books, 1980), p. 83; Winston S. Churchill, *The Second World War. Their Finest Hour* (Boston: Houghton Mifflin Company, 1949), pp. 246-247. See also Colonel J.W. Hackett, "The Employment of Special Forces," RUSI, Vol 97, No. 585 (February 1952), p. 28; and Colonel D.W. Clarke, "The Start of the Commandos," 30 October 1942, p. 1. PRO, DEFE 2/4, War Diary Combined Operations Command (COC).
5. "Hand-out to Press Party Visiting The Commando Depot Achnacarry, 9-12 January 1943," p. 2. PRO, DEFE 2/5, War Diary COC.
6. See Hilary St. George Saunders, *The Green Beret. The Story of the Commandos 1940-1945* (London: Michael Joseph, 1949); *Combined Operations. The Official Story of the Commandos* (New York: The Macmillan Company, 1943); Peter Wilkinson and Joan Bright Astley, Gubbins and the SOE (London: Leo Cooper, 1997), pp. 50-68; John Parker, *Commandos. The Inside Story of Britain's Most Elite Fighting Force* (London: Headline Book Publishing, 2000); Brigadier John Durnford-Slater, *Commando* (Annapolis: Naval Institute Press, reprint 1991); Brigadier Peter Young, *Commando* (New York: Ballantine Books, 1969); Brigadier T.B.L. Churchill, "The Value of Commandos," RUSI, Vo 65, No. 577 (February 1950), p. 85; Tony Geraghty, Inside the SAS (Toronto: Methuen, 1980); and Charles Messenger, *The Commandos 1940-1946* (London: William Kimber, 1985).
7. See Ken Connor, *Ghost Force* (London: Orion, 1998), pp. 13-14; Anthony Kemp, *The SAS. Savage Wars of Peace 1947 to the Present* (London: Penguin, 2001), pp. 37-41;and Adrian Weale, *Secret Warfare* (London: Coronet, 1997), p. 145.
8. See Thomas K. Adams, *US Special Operations Forces in Action. The Challenge of Unconventional Warfare* (London: Frank Cass, 1998), p. 47, p. 56; Mark Lloyd, *Special Forces. The Changing Face of Warfare* (London: Arms and Armour, 1995), pp. 117-119; and Charles M. Simpson III, *Inside the Green Berets. The Story of the US Army Special Forces* (New York: Berkley Books, 1984), p. 35.
9. See Simpson, pp. 35-54; Weale, pp. 147-148; and Joseph Nadel, *Special Men and Special Missions* (London: Greenhill Books, 1994), pp. 33-34.
10. See Geraghty, *Inside the SAS*, pp. 23-39; Kemp, *The SAS -Savage Wars*..., pp. 15-35; Conner, pp. 149-55; and Weale, pp. 149-159.
11. See Kenneth Macksey, *Commando Strike: The Story of Amphibious Raiding in World War II* (London: Leo Cooper, 1985), p. 208; and Conner, pp. 84-85; Kemp, *The SAS -Savage Wars*..., p. 38; Conner, pp. 54-55 and pp. 84-86; and Geraghty, p. 49.
12. See Geraghty, *Inside the SAS*, pp. 23-85; Kemp, *The SAS -Savage Wars*..., chapters 2, pp. 4-6; Conner, pp. 56-262; Nadel, Lloyd, pp. 100-119; Robin Neillands, *In the Combat Zone. Special Forces Since 1945* (London: Weidenfeld and Nicolson, 1997), pp. 105-154; Peter Dickens, *SAS The Jungle Frontier* (London: Arms and Armour Press, 1983); and David Charters and Maurice Tugwell, *Armies in Low-Intensity Conflict* (New York: Brassey's 1989).
13. A perennial problem and complaint by SOF has been the misemployment of the highly trained, but lightly equipped and armed, SOF by commanders who do not understand their role or who simply just do not like them. For example, in Korea, eventually 17 Ranger companies were created. However, they "became nomads attached to various infantry regiments for various periods of time during which they were normally used as shock troops in the most dangerous parts of the front." Thomas K. Adams, *US Special Operations Forces in Action. The Challenge of Unconventional Warfare* (London: Frank Cass, 1998), p. 51.
14. See Colonel Scott Crerar, "The Special Force Experience with the Civilian Irregular Defence Group (CIDG) in Vietnam," in Bernd Horn, Paul B. de Taillon, and David Last, eds., *Force of Choice: Perspectives on Special Operations Forces* (Kingston: McGill-Queen's Press, 2004), Chapter 5; Robin Moore, *The Green Berets* (New York: Ballantine, 1965); pp. 99-119; Susan Marquis, *Unconventional Warfare. Rebuilding US Special Operations Forces* (Washington, DC: Brookings Institutions Press, 1997), pp. 14-20; and Neillands, pp. 154-172.
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18. D.M. Horner, *SAS Phantoms of the Jungle. A History of the Australian Special Air Service* (Nashville: The Battery Press, 1989), pp. 170-391; Weale, pp. 194-200; and Neillands, pp. 152-153 and pp. 178-181.
19. See Weale, pp. 192-194; William H. McRaven, *Spec Ops. Case Studies in Special Operations Warfare: Theory and Practice* (Novato, CA: Presidio, 1995), pp. 287-331; and Benjamin F. Schemmer, *The Raid. The Son Tay Prison Rescue Mission* (New York: Ballentine Books, 2001).
20. Simpson, pp. 72-73; and Adams, p. 158.

21. John L. Plaster, SOG (New York: Onyx, 1997), p. 251, p. 267 and p. 355. SEALs had a kill ratio of 50:1 (Nadel, p. 75). USMC reports indicated that their Force Recon soldiers had a kill ratio of 38:1 as compared to the USMC overall kill ratio of 8:1. Neillands, p. 38.
22. Ibid., p. 357.
23. Quoted in Adams, p. 70, p. 148. See also Michael Duffy, Mark Thompson, and Michael Weisskopf, "Secret Armies of the Night," *Time*, 23 June 2003 (Vol 161, Issue 25).
24. . Marquis, p. 4, p. 35, p. 40 and p. 78. Special Forces manning went from the tens of thousands to 3,600 personnel.
25. Marquis, p. 68.
26. Ibid., p. 160.
27. See Peter Harclerode, *Secret Soldiers. Special Forces in the War Against Terrorism* (London: Cassell & Co, 2000); Paul de B. Taillon, *The Evolution of Special Forces in Counter-Terrorism* (Westport: Praeger, 2001); Benjamin Netanyahu, *Fighting Terrorism* (New York: Noonday Press, 1995); Christopher Dobson and Ronald Payne, *The Terrorists* (New York: Facts on File, 1995); Landau, pp. 187-201; Marquis, pp. 62-65; and Brian MacDonald, ed., *Terror* (Toronto: The Canadian Institute of Strategic Studies, 1986).
28. Harcelrode, p. 51.
29. A few examples include: the storming of the Turkish embassy by three Armenian men on 12 March 1985 (Armenian Revolutionary Army); the paralyzation of the Toronto public transit system on 1 April 1985, as a result of a communiqué sent by a group identifying itself as the Armenian Secret Army for the Liberation of our Homeland in which they threatened death to passengers of the transit system; and the downing of an Air India flight off the coast of Ireland on 23 June 1985, killing 329 people as a result of a bomb that was planted prior to its departure from Toronto's Pearson International Airport.
30. See Major-General Ulrich Wegener, "The Evolution of Grenzschutzgruppe (GSG) 9 And the Lessons of 'Operation Magic Fire' in Mogadishu," in Horn et al, *Force of Choice*, Chapter 7; David Miller, *Special Forces* (London: Salamander Books, 2001), pp. 18-73; Harclerode, pp. 264-285 and p. 411; Adams, pp. 160-162; Marquis, pp. 63-65; Weale, pp. 201-235; Colonel Charlie Beckwith, *Delta Force* (New York: Dell, 1983); Connor, pp. 262-356; Neillands, pp. 204-246; and Leroy Thompson, *The Rescuers. The World's Top Anti-Terrorist Units* (London: A David & Charles Military Book, 1986).
31. On 30 April 1980, six DRMLA terrorists seized the Iranian Embassy located at No. 16 Princes Gate, London, and took 29 hostages. On 5 May, after killing one of the hostages, the SAS launched their assault. In 11 minutes, they freed the remaining hostages, killed five of the six terrorists and arrested the sixth, who was hiding among the released hostages. See Harclerode, pp. 386-408; Connor, pp. 341-355; and Taillon, pp. 41-52.
32. On 4 November 1979, radical Iranian students seized the US Embassy in Tehran, capturing 53 US hostages in the process, who they would hold for 444 days. During this period, a very complicated and complex operation with the overall designation "Operation EAGLE CLAW" was mounted on 24 April 1980. The plan was for six C-130 Hercules to land at Desert One in Iran and await helicopters, which would refuel and then take the assault force to a landing zone from which vehicles would later be taken to launch the actual rescue attempt. However, mechanical problems with the helicopters necessitated the cancellation of the mission. In addition, chaos struck at Desert One. Two aircraft collided and caused the death of eight SOF members. In end, the mission was a cataclysmic failure as a result of faulty equipment, planning, and coordination as well as command and control. See Beckwith, pp. 216-262; Adams, pp. 163-167; Marquis, pp. 69-73; Marquis, pp. 69-73; Taillon, pp. 103-117; and John T. Carney and Benjamin F. Schemmer, *No Room for Error* (New York: Ballantine Books, 2003), pp. 84-100.
33. Department of Defence, *United States Special Operations Command History* (Washington DC: USSOCOM, 1999), pp. 3-16; Marquis, pp. 69-226; Department of Defence, *US Special Operations Forces. Posture Statement 2000* (Washington DC: USSOCOM, 2000), pp. 11-14; and Clancy, *Special Forces*, pp. 10-27.
34. See DoD, *USSOCOM History*, pp. 34-42; Douglas C. Waller, *Commando. The Inside Story of America's Secret Soldiers* (New York: Simon & Shuster, 1994), pp. 225-352; Maquis, pp. 227-249; Adams, pp. 231-244; Carney and Schemmer, pp. 224-236; Connor, pp. 456-501; and Neillands, pp. 287-297.
35. See previous endnote. See also DoD, *USSOCOM History*, pp. 42-44; B.J. Schemmer, "Special Ops Teams Found 29 Scuds Ready to Barrage Israel 24 Hours Before Ceasefire," *Armed Forces Journal International*, July 1991, p. 36; Mark Thompson, Azadeh Moaveni, Matt Rees and Aharon Klein, "The Great Scud Hunt," *Time*, 23 December 2002 (Vol 160, no. 26), p. 34; William Rosenau, *Special Operations Forces and Elusive Ground Targets: Lessons from Vietnam and the Persian Gulf War* (Santa Monica, CA: Rand, 2001); and Cameron Spence, *Sabre Squadron* (London: Michael Joseph, 1997).
36. Marquis, p. 228; and Waller, *Commando*, p. 34 and p. 241; Schemmer, p. 36. Waller states that 7,705 SOF personnel participated.
37. Clancy, *Special Forces*, p. 12; Waller, p. 231 and D.C. Waller, "Secret Warriors," *Newsweek*, 17 June 1991, p. 21.
38. Schemmer, p. 36; and Waller, *Commandos*, p. 34 and p. 241. Waller states that 7,705 SOF personnel participated.
39. DoD, *USSOCOM History*, pp. 44-69; Carney and Schemmer, pp. 245-282; *US SOF Posture Statement 2000*, pp. 15-23; Neillands, pp. 298-315; and Adams, pp. 244-286.
40. The change in momentum became obvious. Using the Americans as a case study, The Assistant Secretary of Defense for Special Operations and Low-Intensity Conflict reported, in 1992, that "our deployments between Fiscal Years 1991 and 1992 grew by 83%." This trend continued. "During 1997," revealed General Schoomaker, "SOF deployed to 144 countries around the world, with an average of 4,760 SOF personnel deployed per week—a threefold increase in missions since 1991." During the Fiscal Year 1997 alone, SOF conducted 17 crisis response operations, 194 counter-drug missions, humanitarian de-mining operations in 11 countries, and they participated in 224 combined exercises for training in 91countries. The following year, SOF conducted 2,178 missions outside the continental USA in 152 different countries. A point worth noting is that the incredible capability and flexibility provided by the US SOF, which numbers about 45,690 members, came at the cost of only 1 percent of their defence budget. James C. Hyde, "An Exclusive Interview with James R. Locher III," *Armed Forces Journal International*, November / December 1992, p. 34; Lieutenant-

General Peter J. Schoomaker, "Army Special Operations: Foreign Link, Brainy Force," *National Defense*, February 1997, pp. 32-33; Scott Gourlay, "Boosting the Optempo," *Janes Defense Weekly*, 14 July 1999, p. 26; and Hyde, p. 34.
41. Ray Bond, ed., *America's Special Forces* (Miami: Salamander Books, 2001).
42. Kim Burger, "US Special Operations get budget boost," *Jane's Defence Weekly*, Vol 37, No. 8 (20 February 2002), p. 2.
43. Glenn Goodman, "Expanded role for elite commandos," *Armed Forces Journal*, February 2003, p. 36; Duffy et al, "Secret Armies of the Night"; Tiron, p. 18, and Harold Kennedy, "Special Operators Seeking A Technical Advantage," *National Defense*, Vol 87, No. 594 (May 2003), p. 20.
44. Ibid., p. 2.
45. Bond, p. 9. This includes an active force element of 29,164 personnel and a reserve component of 10,043. DoD, *US SOF, Posture Statement 2000*, p. 41.
46. Roxane Tiron, "Demand for Special Ops Forces Outpaces Supply," *National Defence*, Vol 87, No. 594 (May 2003), p. 18. There were more than 12,000 deployed to Iraq and approximately 8,000 deployed to Afghanistan.
47. It took only 49 days from the insertion of the first teams with Northern Alliance forces to the fall of Kandahar. This was achieved with approximately 300 Special Forces (SF) soldiers. These operators rallied and forged cohesive teams out of the unorganized anti-Taliban opposition groups and, more importantly, using a small amount of high-tech targeting equipment, brought the weight of American airpower down on Taliban and al-Qaeda fighters. Air strikes brought down by one of the first SF teams in country, aided by a lone Air Force combat controller, are credited with killing as many as 3,500 fighters and destroying up to 450 vehicles. After the fall of the Taliban regime, approximately 18 small SOF teams,composed of about a dozen Special Forces personnel each, established outposts deep in enemy territory and continue to work with Afghan units. Glenn Goodman, "Tip of the Spear," *Armed Forces Journal International*, June 2002, p. 35; Michael Ware, "On the Mop-Up Patrol," *Time*, 25 March 2002, pp. 36-37; Thomas E. Ricks, "Troops in Afghanistan to take political role Officials say remaining fights to be taken by Special Forces, CIA," *Duluth News Tribune*, 7 July 2002, p. 1: and Massimo Calabresi and Romesh Ratnesar, "Can we Stop the Next Attack?" *Time*, 11 March 2002, p. 18.
48. "Chapter 11-Special Operations," NATO Publication AJP-1 (A), Third Draft, March 1998, p. 11-1.
49. Quoted in Carney and Schemmer, p. 13.

THE EMPLOYMENT OF AIRBORNE (PARACHUTE) FORCES IN MODERN ASYMMETRICAL WARFARE

Captain J.N. Rickard

The current global security environment poses fundamentally different challenges to Western armies than the Cold War ever did. Every region now faces complex, diverse, non traditional and interconnected security challenges as a result of the end of the bi-polar world. Resource scarcity, globalization, demographic shifts, unparalleled technological advancement, proliferation of weapons of mass destruction (WMD), drug-trafficking and ethnic, religious and racial hatred compound the problem.[1] Guerrillas and subversives now boast cheap cell phone communications assets and can employ cyber capabilities and WMD, while terrorists have succeeded in using airliners as missiles. This broad spectrum of modern threats and capabilities has generated a new term: "asymmetric."

In clearly demonstrable ways, however, the modern asymmetric opponent still reflects the experience of the British Army in Malaya, Borneo, Northern Ireland and Cyprus, the American Army in the Philippines and Vietnam, the French Army in Algeria and the Israeli Army on its multiple borders.[2] Just days into the Coalition advance on Baghdad in 2003, for example, Lieutenant-Colonel Bryan McCoy, commander of the 3rd Battalion/7th Marines, declared that "The enemy has gone asymmetric on us. There's treachery. There are ambushes. Its not conventional."[3] The term was new, but the reality on the ground was not and neither were the fundamental operating principles of McCoy's opponents.

Guerrillas, subversives and terrorists continue to feed off of traditional ideological, political and religious fervour and successfully exploit the significant military advantage of being able to choose the time and location of their attacks. All too frequently, they can control their own casualty rates by breaking off contact before being decisively engaged and have benefit of secure bases and light logistical requirements with which they inflict disproportionate damage on Western military forces.[4] In essence, modern asymmetrical warfare is an evolutionary step built fundamentally on the classic tactics and strategy of irregular warfare.[5] The principal characteristic of asymmetric warfare remains the management of inferiority from a nebulous centre of gravity.

Trying to identify an elusive guerrilla force's centre of gravity is a difficult proposition. Even believing we have it right does not mitigate the problematic nature of deciding how best to attack that centre of gravity. One possible course of action (COA) is to employ an underutilized military asset, airborne (parachute) forces, as part of a force structure capable of exerting continuous concentric pressure against an asymmetric opponent's area of operations (AO). Paratroopers line the order of battle of all major nations today but are viewed as legacy assets by many military professionals desperate to unlock the secret to the Revolution in Military Affairs (RMA). The shelving of the airborne idea is premature, however, and this article addresses what modern paratroopers can accomplish in asymmetrical warfare.

DISCUSSION PARAMETERS

My methodology does not include examining the parachute function in urban areas or in peace support operations under the jurisdiction of the United Nations. I specifically desire to examine paratroopers in combat operations against the physical manifestations of a guerrilla-type enemy and assess what they can accomplish on the three-dimensional battlefield not necessarily in the five-dimensional battlespace. Furthermore, I am not interested at this point in telescoping the airborne capability into the future; rather, I wish to examine their functionality now and in the short term.

LIMITATIONS AND CAPABILITIES OF PARATROOPERS

At various times since the end of World War II, military observers have prophesied the imminent demise of the parachute concept. Even during the war, events conspired to threaten its existence. When the German 7th Flieger Division suffered 50% casualties during the assault on Crete in 1941, Hitler declared the days of the paratrooper at an abrupt end because the new weapon had lost its cardinal virtue-surprise.[6] There is no question that modern airborne forces still suffer from several operational limitations (as does every military branch). Poor weather continues to threaten operations (although to a lesser extent than in the past), and it takes detailed planning to execute a drop according to our present doctrine. Fundamentally, the paratroopers' greatest weakness, obvious since 1940, is that they have a short window of survivability once on the ground unless additional forces can achieve a rapid link-up.

Despite these limitations the airborne concept has been vigorously defended in Western military journals since 1945.7 Paratroopers possess significant functional strengths, such as broad specialized skills and training in a wide range of environments, that continue to be overlooked. They excel in survival and navigational techniques in mountain, desert, urban and jungle environments. Steady improvements have been made to the basic act of jumping with the result that the jump injury rate has been reduced to somewhere around 0.5%.[8] This is important because the act of jumping continues to serve as one way to psychologically prepare soldiers for combat.

Paratroopers motivate themselves and generate a valuable psychological mystique through the act of jumping. Gideon Aran, an Israeli paratrooper who saw action in the 1973 Yom Kippur War, has written that the paratrooper's "superiority in combat emanates from such characteristic qualities as courage and the seeking of action, which are closely linked to the jump experience."[9] They can generate greater fighting power than regular army units not because of their unique mode of entry into battle but because they demonstrate an intense desire to come to grips with the enemy once on the ground.[10] My observation is historically driven, for paratroopers have proven to be physically tough, well disciplined and animated by a desire to fight and never surrender. Their record as ground infantry in Northwest-Europe, Italy and the Pacific during World War II, and later at such places as Dien Bien Phu and Mount Hermon, has been stellar.[11] It is primarily because of their combat record that I further believe paratroopers to be elite light-infantry soldiers.[12]

I am fully cognizant of the fact that the airborne mentality, as a direct by-product of eliteness, can lead to excesses and rogue elements. The French experience in Algeria in the 1950s and the Canadian experience in Somalia in 1993 prove this beyond a shadow of a doubt.[13] Even during the recent International Stabilization Assistance Force (ISAF) mission in Kabul, one

Canadian Army officer noted that British paratroopers "overstepped the line on occasion."[14] Nevertheless, the airborne "edge" and combativeness is a demonstrable counterweight to the political and religious indoctrination of the guerrilla and terrorist that we should not overlook.

Beyond their impressive tactical skill-sets, airborne forces also possess several critical operational advantages. They can deploy quickly over considerable distances, crossing obstacles and difficult terrain, and can strike deep, possibly even against an enemy's centre of gravity. They are capable of theatre entry and, since their AO (or more importantly their area of influence), is difficult for an enemy to define, they can achieve surprise as well. Our doctrine states that they can have a "psychological effect on the enemy . . . far outweighing their actual capability."[15] U.S. Secretary of Defense Donald Rumsfeld's recently expressed desire to retool American forces to deploy to a distant theatre in 10 days, defeat an enemy within 30 days and be ready to fight again in another 30 days has "airborne" written all over it.[16]

THE AIRBORNE ROLE IN ASYMMETRIC WARFARE

Paratroopers have much to offer a theatre commander in the way of hunting and destroying the guerrilla, terrorist and insurgent. To be effective, however, paratroopers must be consistently capable of gaining and maintaining contact with the enemy in order to attrite him through direct combat or pinpoint him for indirect fire assets. I believe successful airborne operations at the present time are dependent upon eight principal factors including mindset, weather, intelligence, surprise, survivability, sustainment, mobility and flexibility. Examining each factor reveals fundamental criteria upon which to build a model of the optimal employment of paratroopers in asymmetrical warfare.

MINDSET

The belief that airborne operations have historically enjoyed few successes and have been excessively wasteful of lives continues to persist. This may explain why, for all the faith placed first in AirLand Battle and now manoeuvre warfare doctrine, there remains a general reluctance to drop men from the sky in order to come to immediate grips with an enemy. The dropping of 100 U.S. Army Rangers into Afghanistan in 2001 to capture an airfield near Khandahar and 1000 paratroopers from the U.S. 173rd Airborne Brigade to secure an airfield in Khurdish-held northern Iraq in 2003 appear to represent the exception rather the rule in current doctrinal thinking.[17]

It is now far more likely that paratroopers will be used in peace support operations, minus the jumping. This is a misguided use of elite troops.[18] They should be reserved for their primary strategic role of rapid forced entry into remote hotspots and specifically retooled for the modern asymmetric challenge. Therefore, the mindset of senior officers responsible for operational planning has to change so that the employment of parachute forces becomes a viable, sought after option in any planning process for combating an unconventional enemy, and not one that invariably raises the spectre of Arnhem.[19]

WEATHER

The single greatest limitation confronting the employment of airborne forces is adverse meteorological conditions. Wind shear, crosswinds and ambient temperatures all affect

SUMMARY OF COMBAT DROPS SINCE 1948

Place	Date	Unit	Mission	Accomplished?
INDONESIA				
Maguwo Airport/Java	12/48	Dutch Para Combat Gp	Secure	Yes
Djambi oil fields/Sumatra	12/48	Dutch Para Combat Gp	Capture	Yes
Rengat/Ajer Molekoil fields/Sumatra	01/49	Dutch Para Combat Gp	Capture	Yes
Gading/Java	03/49	Dutch Para Combat Gp	Capture	Yes
KOREA				
Sukchon	03/50	187 A/B RCT	Blocking	Partially
Munsan-ni	03/51	187 A/B RCT	Blocking	No
SINAI				
Miltla Pass	10/56	Israeli 1st Bn/202 Para Bde	Seize/Hold	Yes
At-Tur	11/56	Israeli 1st Bn/202 Para Bde	Secure	Yes
Gamil airfield	11/56	Brit 3 Batt/16 Ind Para Bde Gp	Seize	Yes
Raswa Canal	11/56	Fr 2 Colonial Para Reg	Seize	Yes
El Tor Airfield	11/56	3 Batt/202 Para Bde	Seize	Yes
CUBA				
San Blas/Bay of Pigs	04/61	Free Cuban Paras/Bde	Blocking	No
CONGO				
Stanleyville	11/64	Belgian Para Cdo Reg	Host Rescue	Yes
Brazzaville	06/97	Fr AB/Foreign Legion	Evacuate	Yes
SIX DAY WAR				
Ras Sudar	06/67	Israeli Para Bn	Reinforce	Yes
BANGLADESH				
Tangail	12/71	50 Indian Para Bde	Capture	Yes
VIETNAM				
Bac Kan	10/47	Fr AB Bde	Seize	Yes
Cao Bang	10/47	Fr AB	Seize	Yes
Don Khe	02/50	Fr	Counterattack	Yes
Nghia Lo	10/51	Fr Regiment	Cutoff/Atk/Reinf	Yes
Hoa Binh airfield	11/51	1, 2, 7 Colonial Para Regs	Baiting	Yes
Phu Tho	10/52	Fr Reg	Baiting	No
Phu Doan	11/52	Fr 10 AB Div	Seize	
Lang Son 2 Foreign Legion Bn	07/53	2&8 Colonial Para Bns	Destroy	No
Dien Bien Phu	11/53	Fr Regiment/Foreign Legion	Raid	Yes
Ap Bac	01/63	ARVN Para Bn	Cut off	No
War Zone C	02/67	173 AB Bde	Blocking	Yes
CYPRUS				
Nicosia	06/74	Turkish Para Cdo Bdes	Seize	Yes
ANGOLA				
Cassinga	04/78	South Africa Paras	Raid	Yes
ZAIRE				
New Town, Kolwezi	05/78	FAZ* 2 Coy(-)/311th AB Bn	Attack/Reinf	Yes
North Kolwezi	05/78	Foreign Legion Paras	Seize/Resc/Dest	Yes
East Kolwezi	05/78	Foreign Legion Paras	Find/Kill	No
GRENADA	83	US Rangers	Secure airfield	Yes
PANAMA				
Panama City	12/89	1st Bde/82 AB Div	Capture	Yes
Torrijos-Tocumen Airfield	12/89	75th Ranger Reg	Capture	Yes
AFGHANISTAN				
Airfield/Taliban complex	01	elms 75th Ranger Reg	Capture	Yes
IRAQ				
Northern Iraq	07/81	Israeli Paras	Laser Desig	Yes
Erbil (airstrip)	03/03	173 AB Bde (1000)	Secure airfield	Yes

parachute operations. It is not simply a matter of forecasting the weather at the initial staging area but also along the approach routes and over the objective itself.[20] The success of the mission becomes more problematic if the operation is executed over a very long distance. Therefore, moderate weather is desired. Forward deployment of airborne forces and lift assets close to the principal theatre would mitigate the uncertainty of the "weather window."

INTELLIGENCE

For airborne operations to be effective against an asymmetric threat the operational planning process (OPP) and intelligence preparation of the battlefield (IPB) must be based on real-time or near real-time intelligence. Even intelligence twenty-fours hours old will most likely be irrelevant. The intelligence cycle consists of direction, collection, processing and dissemination, and it takes time. NATO now operates on the principal of the all source cell (ASC), which is designed to control the massive amount of raw data produced as a result of the advent of the information age.

The best way to control this mass of information with respect to an airborne operation against a guerrilla opponent is by directing intelligence assets to generate combat intelligence, which covers the enemy, the weather and the ground. Essentially, these three elements would drive the commander's critical information requirements (CCIR) and exclude extraneous or marginal intelligence. Absolutely everything hinges upon positively identifying the enemy's location. Red situational awareness (SA) must be extremely high. The Intelligence, Surveillance, Target Acquisition and Reconnaissance (ISTAR) system of systems must be able to identify and locate key guerrilla or terrorist leaders, operating cells/and or units and critical centres of gravity.[21] However, the ability to maintain surveillance contact is paramount. Image intelligence (IMINT) generated by satellites with resolutions better than one metre could verify the physical manifestations of enemy activity while signals intelligence (SIGINT) could build a profile of enemy locations by intercepting communications.[22]

The airborne commander, although exploiting the full potential of the ASC of his higher HQ, would also benefit greatly from developing close ties with government intelligence field operatives in his AO. The CIA, for example, has some 600-700 field operatives with case officers stationed at American embassies throughout the Third World. Their mandate is to understand local languages and customs.[23] It is quite obvious that in the war on terrorism, Western militaries are at a significant disadvantage. During the Gulf War, the United States had inadequate numbers of Arabic speakers, and the situation has not improved greatly in Afghanistan or Iraq.[24] Indigenous human intelligence (HUMINT) can be of enormous value in operations against guerrilla forces. Trusted locals, outfitted with secure communications equipment, could be the critical link in the airborne commander's real-time SA on the ground and in the air.

SURPRISE

Surprise is the fundamental trump card of any parachute force. Even if stealth technology could soon be applied to transport aircraft, surprise will still initially depend on operational security and secure staging areas. The need for the latter cannot be over-emphasized. The security problems the U.S. 1st Battalion/508th Airborne Combat Team (ABCT) would encounter if it tried to mount an operation against Afghanistan from its base in Vicenza, Italy (first transported

to the Aviano Air Base) are not insurmountable but are significant. The prevalence of satellites and the "CNN effect" has made it increasing unlikely that a large armada of transport aircraft could reach the objective, even a remote one, undetected. For example, it has been estimated that the Panamanian Defence Force (PDF) knew of the approach of the 82nd Airborne Division at least three hours before the drop in 1989.[25] Speed of execution and the use of deception would reduce the probability of detection at the initial staging area.

Once an airborne force is in the air, it is pointless to continue on to an objective when the conditions under which the operation was first planned no longer apply. The initiative and the ability to achieve surprise can only be maintained at this point if the airborne commander can receive real-time updates inbound and he possesses the ability to alter course to a new location. Once the final objective has been identified, it is critical that the drop zones (DZs) are not prepped with initial rocket fires, artillery or by other ground and air platforms. This is anathema in an asymmetrical environment. The requirement for prepatory fires is sound if it is assessed that significant enemy forces can converge on the DZ quickly (in a matter of several minutes). Yet every effort should be made to avoid it because it telegraphs intentions and undermines the intent from the beginning. American air-mobile operations in Vietnam clearly proved this.

Three critical criteria are derived from the factor of surprise. The first criterion is that parachute operations should be mounted from remote locations to maintain operational security. Preferably, staging areas should be remote even from airfields used to support forward bases. The second criterion is that the airborne commander must possess the ability to receive real-time intelligence and mission-changes (sometimes referred to as re-call) possibly by an e-mail-capable laptop hardwired to the airframe. Secure voice communications are not enough because, in order to drop somewhere else, the commander would require IMINT of the terrain in order to prepare a new drop. The result would be the ability to alter course inbound to take rapid advantage of changes on the ground.

SURVIVABILITY

Currently, it is unlikely that any asymmetrical enemy could interfere with an inbound airborne mission by employing fighter aircraft. The more likely scenario is that guerrilla forces could present the airborne force with a limited number of sophisticated air defence (AD) assets of the surface to air missile (SAM) variety. In an asymmetrical environment, clear inbound flight paths would be hard to guarantee. Thus, a degree of risk would have to be accepted if AD assets could not be destroyed en-route or if flares proved ineffective. Parachute forces can exit their aircraft in a matter of seconds. The static-line combat drop would probably take place between 500 and 900 feet (the French dropped from 400 feet in the 1956 invasion of the Suez Canal), which would mean no more than thirty seconds exposure time in the air. The drop speed from a C-130 is 130 knots/hr, but there is every reason to believe that faster drop speeds at lower altitudes are possible.[26]

A parachute company could probably re-assemble once on the ground within fifteen minutes. If they were outfitted with GPS, voice-activated communications and individual direction prompters, the assembly time would be reduced even further. This timeframe is an acceptable risk. Against a conventional enemy, the rapid consolidation to defend the airhead is essential, but it may not be as vital against guerrillas.[27] This suggests that drop error, though avoided if possible, is not the show-stopper that it might otherwise be.[28] Even if the asymmetric opponent

possessed the ability to congeal into larger units of company size or greater, paratroopers could call in both long-range ground artillery, air-power and naval indirect fire assets. They could avoid overmatch by employing UAVs to screen their movements. Parachute forces are also vulnerable at the end of their missions if they are forced to walk out. Survivability would therefore be enhanced if minimal transport aircraft were involved in the drop and dedicated, robust helicopter assets like UH60 Black Hawks or CH53 Super Stallions were available for extraction.

SUSTAINMENT

The sustainment of a parachute force is directly related to its mission. The best way to mitigate anxiety over sustainment issues would be to design parachute missions to be short and decisive. A task-tailored parachute force designed to fight scattered guerrillas would alleviate the need for the heavy organic fire support platforms usually associated with airborne brigades and divisions. The 82nd Airborne Division Ready Force (DRF) of battalion size, for example, has six 105 mm howitzers. Paratroopers hunting the guerrilla would require food, water, medical supplies, demolition assets, night-vision equipment, and sophisticated, but light, communications equipment-every opportunity should be taken advantage of to exploit advancements in lightweight materials.

MOBILITY

Currently, the 82nd Airborne Division represents the premiere rapid entry force in the world, capable of moving an entire brigade from the continental United States in 18 hours. While this may be impressive from the standpoint of strategic entry, it is insufficient on the asymmetrical level. In Indo-China, the French had more parachute battalions than lift capability and thus failed to employ valuable assets to maximum effect. Today, an entire parachute company can travel in two C-130 Hercules transport aircraft. A single C-17 or C-141 can carry 102 or 164 paratroopers respectively.[29] Therefore, current airborne forces enjoy great air mobility.

An obvious question is that, if helicopters are suitable for extraction, why can't they be the primary delivery platform?[30] Helicopters are noisy and often sacrifice surprise for mobility. Air-mobile operations require elaborate flight corridors and, unless the helicopters were large, would require several lifts to move a large force. Helicopters also have significant limitations in deserts and hot climates, the exact places where we are more than likely to be fighting for quite some time. Finally, they are vulnerable to ground fire. The United States lost some 5,000 helicopters in Vietnam, mostly to small-arms fire. They clearly telegraphed operations.[31] I believe in the value of the helicopter (air-mobile operations are another skill we are purposely allowing to whither), but in the context of this paper, I believe the paratrooper has unmistakable advantages.

Ground mobility is also essential, but it is hindered by artillery, anti-tank systems and heavy vehicles to fight conventional opponents. Vehicles produce a road-bound mentality, and the guerrilla will avoid the roads except to execute convoy ambushes. However, super-fit paratroopers can contest foot mobility with the guerrilla without tying themselves to the defence of organic heavy weapons platforms. The criterion derived from the mobility factor is the necessity for minimal heavy weapons.

FLEXIBILITY

Parachute forces must be capable of performing a wide variety of tasks against an asymmetrical enemy. The Canadian manual Airborne Operations identifies four types of operations, including sieze and hold, area interdiction, raids and special operations such as deep penetration patrols and internal security operations. The seize and hold operation represents the classic employment to gain and retain airfields or airheads. This is precisely what the U.S. 75th Ranger Regiment is designed to do.[32] The airborne raid has proven successful on different occasions, such as the French at Dien Bien Phu and the South African 44th Parachute Brigade at Cassinga in Angola in May 1978.[33] Each operation requires different skill sets, and the logical deduction is that parachute forces must be capable of swift changes in mind-set, at one time being aggressive in the pursuit of an elusive foe, while at the same time displaying patience and restraint to gather intelligence.

OPTIONS OPEN

There are at least three principal ways in which airborne (parachute) forces can be employed in modern asymmetrical warfare, including (1) the employment of parachute qualified special forces at the strategic level, (2) the conventional employment at the operational level and (3) the tactical employment in the close fight.

STRATEGIC (SPECIAL OPERATIONS FORCES)

Special operations forces (SOF) are a strategic resource employed under the command of a theatre commander. They boast the standard jump qualifications but possess skills and abilities beyond even that of the regular paratrooper.34 There is currently a significant willingness to employ SOF and a moderate willingness to send them into action via parachute.[35] They are ideal for taking the fight to the enemy in remote locations. The British SAS did so in Malaya in the 1950s, penetrating the dense jungle canopy by "tree-jumping," aiming for a big tree with healthy branches to crash in to.[36] Modern SOF could execute high altitude low opening (HALO) or high altitude high opening (HAHO) drops to avoid radar. High altitude high opening drops are more complicated than HALO drops and are more vulnerable to modern radars. However, in Third World countries, there is every reason to believe that HAHO forces, dropped from 7,500 feet or higher, could drift for several miles and penetrate enemy airspace undetected.[37]

OPERATIONAL (CONVENTIONAL)

Parachute forces could be employed to block escape routes in difficult terrain. In virtually all guerrilla wars up to the present, the guerrillas have enjoyed cross-border sanctuary. The Algerians fled to Tunisia, the Mujahideen fled across multiple borders, the Viet-Cong escaped to Cambodia and Laos, and the Taliban fled into the mountainous border region with Pakistan. Suitably task-tailored airborne forces could perform much better than regular army units in isolating the battlefield in remote border regions. Units like the 173rd Airborne Brigade would be ideally suited for such missions because their size would permit the coverage of a wide area.

TACTICAL (CLOSE FIGHT)

Small-sized parachute units could be tightly integrated with battle groups or brigades to facilitate rapid action. This is not a new concept but was practiced in the British Army in the 1960s.[38]

They were called parachute company groups. The parachute company would be held well forward in the AO under operational command of the brigade commander. The parachute company would conduct short to medium reconnaissance and fighting patrols. However, its main function would be to act as the principal manoeuvre element instead of mechanized forces for the brigade or battle group commander. The paratroopers could form either the hammer or the anvil or execute bold raids against guerrilla positions inaccessible to the bulk of the conventional brigade or battle group. The parachute company group would be a light

MULTIPLE FACTORS MATRIX

		Option 1	**Option 2**	**Option 3**
		Strategic(Special Forces)	**Operational(Conventional)**	**Tactical(Close)**
Factor	**Criteria**			
Mindset	-Willingness toemploy expensive resource	Willingness currently exists	Willingness exists under certain conditions	Willingness does not exist due to lack of appreciation
Weather	-Moderate conditions	Long-range forecasts required	Long-range forecasts required	Short-range forecasts acceptedif elements are forward deployed
Intelligence	-Critical need for real-time updates	Absolutely essential for precision strikes	Greater acceptance of less than real-time intelligence	Difficult to overcome poor intelligence once on the ground
Surprise	-Capability to alter mission in mid-flight-Mounted from remote locations-Capability to receive real-time updates	Should be possible in high percentages.	Requires secure staging areas and use of deception while avoiding fire prep of DZ	Small, forward deployed assets employing deception and avoiding fire prep of DZ
Survivability	-Use of minimal transport a/c-Requirement for dedicated extraction assets	Plausible to employ only 1 a/c and small helicopter assets could extract with stealth	Vulnerable to AD assets inbound and requires significant helo resources for extraction. Could always walk out	Few a/c minimizes threat from AD assets and small number of helicopters required to extract
Sustainment	-Short, decisive operations	Covert, night-timere-plenishmentpossible	May or may not require traditionalground link-up but could defend airhead for resupply	Night-time re-supply possible
Mobility	-Lightness in numbers and equipment-No heavy platforms	Require 1 or 2transports	Require manytransports	Require fewtransports
Flexibility	-Ability to execute many different tasks with concomitant changes in mind-set-Initiative	Limited by size	Capability to execute many tasks, but mounting time a concern	Moderate ability to execute different tasks but premium on aggressive patrolling

organization with interpreters, indigenous guides, extra medics and sniper detachments. Robust transport helicopters such as Black Hawks or Super Stallions would form a dedicated extraction capability. The parachute company's effectiveness would lie chiefly in the willingness of the higher commander to use it as a regular and viable option.

OPTIONS COMPARED

The SOF option has great appeal because the elite nature of the soldiers involved suggests a high rate of success. However, SOF are few in number and the level of damage they can inflict on guerrilla forces is questionable. The British SAS fought in Malaya for nine years and captured or killed 100 guerrillas, roughly 11 per year. Yet, the key was that they took the fight directly to the enemy's remote sources of strength and never surrendered the initiative. The SOF option meets several of the stated criteria. There currently exists a willingness to employ them in parachute operations, and their operations are driven by the latest intelligence. They require perhaps only one aircraft and have helicopters on standby for extraction. Finally, they are light in numbers and kit and possess the ability to execute multiple specialized tasks. However, their small numbers prohibit some types of missions, and any casualties represent a significant portion of their fighting power.

Despite the addressed limitations of the SOF option, it nevertheless presents better prospects for success than employing elite paratroopers in a border interdiction role. The security problem may not be critical inbound to a remote region but could probably exist near the initial staging areas. Even if the conventional parachute force dropped undetected into a remote border region, there exists the high probability that guerrillas and terrorists could still penetrate any cordon.[39] This conventional option meets the mindset criterion fairly well, but long-range forecasts could pose a serious problem. Because of the mounting time for a large conventional operation, there would have to be acceptance of somewhat dated intelligence. If it were possible to launch from secure staging areas and employ deception, a conventional parachute force might be able to achieve surprise. However, altering the mission inbound would be difficult for a large force. A parachute battalion or brigade employed in a border interdiction role could defend its own airhead and realistically receive parachute re-supply, but the greatest weakness of a large force is the requirement for numerous aircraft with fighter escort. A large force would be capable of great flexibility in executing different tasks, but the mounting time remains the principal drawback.

The third option suffers in comparison to the first two primarily in respect to mindset. There appears to be little understanding, let alone willingness to employ a company-sized parachute force in a tightly integrated way with conventional forces. Beyond mindset, however, option three meets several key criteria. If the parachute company was forward deployed, it could take rapid advantage of moderate weather conditions even if longer-range forecasts threatened to close the weather window. Moreover, its proximity to the fight would give it an advantage in intelligence and, with the ability to receive IMINT, its mission could be altered inbound to exploit changing conditions.

Option three also meets the survivability criterion in that no more than three transport aircraft would be required, and a relatively small number of helicopters would be required for extraction. Operations would be short and decisive and would thus meet the sustainment criteria. A parachute company unhindered by anti-tank assets and artillery would meet the lightness criteria and would possess the ability to execute several dismounted tasks.

CONCLUSION

The key factors essential to successful parachute operations against the modern asymmetrical threat have been outlined, and three options have been presented for employing such forces. Each option has merit. Indeed, option one has been in use for many years, and option two continues to be a viable alternate use of parachute forces against guerrillas. Option three has not really been tested in combat for many years. However, this fact does not mean that it is less valid than the other two. On the contrary, the tactical employment of parachute forces in the close battle demands the greatest attention because it quite possibly could impact the asymmetrical environment to a greater extent than a few elite SOF personnel or a large conventional parachute unit sacrificing mounting speed for survivability against conventional threats. Option three meets the most criteria derived from examining eight specific factors. Although the precise SOPs of employing a light parachute company need to be identified and tested, option three nevertheless represents the best way to combat the modern asymmetrical threat with parachute forces. The Canadian Army's disregard for parachute forces is unwarranted and our present airborne doctrine, as it relates to asymmetrical warfare, is unimaginative.

About the Author ...

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END NOTES

1. Graham H. Turbiville, Jr., Colonel William W. Mendel and Jacob W. Kipp, "The Changing Security Environment," http://www-cgsc.army.mil/milrev/english/mayjun97/turbivil.htm.
2. Some see the modern asymmetric threat as nothing more than reflecting the classic action-reaction-counteraction cycle. To them, the British use of tanks for the first time at Cambrai represented asymmetry, and rightly so. Colonel (ret'd) Clinton J. Ancker III and Lieutenant Colonel (ret'd) Michael D. Burke, "Doctrine for Asymmetric Warfare," *Military Review*, (July-August 2003), 18, 23. The Canadian Army's latest visionary doctrinal publication casts asymmetry in another classic mold, that of weakening a superior opponent and confounding his response. *Future Force: Concepts for Future Army Capabilities*, Directorate of Land Strategic Concepts, Kingston, 2003, p. 63. I believe the term asymmetry is interchangeable with guerilla, terrorist and subversive and have yet to see any reason to elevate it beyond mere synonym.
3. Lieutenant-Colonel Bryan McCoy, quoted in *Time*, (April 7, 2003), 23.
4. The Mujahideen consistently achieved all these military advantages at the expense of Soviet forces in Afghanistan. See Dr. Robert F. Baumann, *Compound Warfare Case Study: The Soviets in Afghanistan*, http://www-cgsc.army.mil/csi/research/comwarbaumann.htm, p. 2. However, it is clear that insurgents in Chechnya are "efficiently organized into battalions, companies, platoons, and squads with all essential military occupational specialties from snipers, demolitions specialists, rocket-propelled grenade gunners, to combat engineers." Colonel Sergey A. Kulikov, "Insurgent Groups in Chechnya," *Military Review*, (November-December 2003), 21.
5. Irregular Warfare actually predates regular, conventional warfare between recognizable military units. Walter Laqueur, *Guerilla: A Historical and Critical Study* (Boston: Little, Brown, 1976), 3.
6. Chris Ellis, *7th Flieger Division: Student's Fallschirmjager Elite* (Hersham, U.K.: Ian Allan, 2002), 44. Even General Eisenhower originally considered airborne divisions too costly for their capabilities. Eisenhower to Brigadier General Harold R. Bull, 4 April 1942, Alfred D. Chandler, ed., *The Papers of Dwight David Eisenhower: The War Years* (Baltimore: Johns Hopkins Press, 1970), I: 226-27.
7. For a negative perspective on airborne forces see Lieutenant Colonel Frank B. Case, "Airborne: The Tired Revolution," *Military Review*, (August 1965), 86, 89. Arguments in support of the airborne idea have been more numerous. See Lieutenant Colonel Norman E. Martin, "Dien Bien Phu and the Future of Airborne Operations," *Military Review*, (June 1956), 26; Lieutenant Colonel John M. Stephens, Jr., "The Growing Demand for Airborne Forces," *Military Review*, (April 1961), 9-17; Ferdinand O. Miksche, "The Future of Airborne Operations," *Military Review*, (October 1964), 38; Captain Maurice A.J. Tugwell, "Future of Airborne Forces," *Army Quarterly*,

(July 1955), 158; Major James K. McCollum, "Drop in Troops: Fast and Flexible," *Army*, (September 1976), 44.
8. Harold Kennedy, "Army Aims for More Precise Ways to Drop Troops, Cargo," *National Defense Magazine*, (March 2001), 26. The training cycle of the 1st Battalion, The Parachute Regiment in 2001 gives a good indication of the paratrooper's cross-training. After completing an operational tour in Northern Ireland, the battalion conducted a major exercise in Kenya including parachute drops and jungle warfare training. Following that, it participated in rigorous Adventure Training that challenged courage and increased morale and cohesion while fine-tuning valuable skill-sets. http://www.army.mod.uk/para/1bn.htm.
9. Aran also argued that the elite status of paratroopers "transcends the very act of jumping" and rests more on their heroic record. "Parachuting," *American Journal of Sociology*, Vol. 80, No. 1, (July 1974), 150. See also Stephen E. Ambrose, *Band of Brothers* (New York: Simon & Schuster, 1992), 26; Roger Beaumont, "Airborne: Life Cycle of a Military Subculture," *Military Review*, (June 1971), 54-55 and Major James K. McCollum, "The Airborne Mystique," *Military Review*, (November 1976), 16-21.
10. I have defined 'Fighting Power' as "the moral compliment to combat power. It is the synergy of moral factors within a military unit that creates moral force. Moral force allows a unit to withstand casualties and setbacks and successfully engage in extended combat. The generation of fighting power allows a unit to impose its will upon the enemy." See Captain John N. Rickard, "The Canadian Army and Fighting Power," *Army Doctrine and Training Bulletin*, Vol. 6, No. 3, (Fall/Winter 2003), 33-42. My concern with Fighting Power has already been realized in Iraq where American forces, in combat for over a year, are showing signs of lowering levels of fighting power.
11. Even when operations were poorly planned, the paratrooper usually rose to the occasion. Many men of the British 3rd Parachute Battalion "Red Devils" were not proficient parachutists during the November 1956 invasion of the Suez Canal. They were too poorly trained to drop with their weapons but nevertheless succeeded in dropping into a DZ one mile deep by half a mile wide. Only 10-15% were combat veterans but they were "fit, tough and much admired by their officers." The 500 men of the French 10th Parachute Division, who also took part in the invasion, were "a hardened lot" consisting of veterans from Algeria and Vietnam. They executed a precision drop from 400 feet onto a contested DZ one half mile deep by 150 yards wide. Major R.W. Rathbun, *Operation Musketeer: A Military Success Ends in a Political Failure*, Marine Corps Command and Staff College, 1984.
12. My definition of elite includes two *passive* criteria, rigorous selection (if self selected, one still must meet the high standards) and tough missions. However, the *active* criteria of performance in combat is the true basis of the term. Thus, I consider the U.S. Army Rangers and Marines, British Royal Marines, and the French Foreign Legion as elite *conventional* forces. By way of example, there was nothing special about the selection or early missions assigned the Canadian Corps in the First World War, but it quickly became recognized as a truly elite shock force capable of accomplishing the very toughest missions.
13. Perhaps the most stunning example of the airborne sense of eliteness gone awry occurred in Algeria. French paratrooper commanders connived with the settlers in the May 1958 revolt and again in January 1960. In April 1961 they conspired to overthrow the government of Charles de Gaulle. See John E. Talbott, "The Myth and Reality of the Paratrooper in the Algerian War," *Armed Forces & Society*, III, 1 (November 1976), 69, 71. For an excellent overview of the Canadian experience with the airborne mentality in the early 1990s see Donna Winslow, "Rites of Passage and Group Bonding in the Canadian Airborne," *Armed Forces & Society*, XXV, 3 (Spring 1999), 429-457; Luke Fisher, "Canada's Shame," *Maclean's*, (January 30, 1995), 14-16. Despite the negative image of the Canadian Airborne Regiment in the mid-1990s, Major-General Guy Tousignant, who replaced Major-General Romeo Dallaire as the UN Force Commander in Rwanda in August 1995, considered the airborne "the best soldiers I had." He added that "If I had been given a full battalion of Airborne troops, I could have secured the four corners of Rwanda in half the time. And their ability to operate at night impressed the Rwandan army." Bruce Wallace, "Fighting a Reputation: The Airborne fails to shake the disgrace of Somalia," *Maclean's*, (January 30, 1995), 17.
14. Lieutenant Colonel S.T. Vida, Professional Development (Ex Strathcona Fortress) presentation given to the officers of Lord Strathcona's Horse (Royal Canadians), 4 February 2004. Lieutenant Colonel Vida made clear, however, that such actions took place within the context of largely well-executed operations.
15. B-GL-300-002/FP-000 *Land Force, Vol. 2, Land Force Tactical Doctrine*, 1997-05-16, p. 7-6.
16. Washington Report, April 2004, CDLS(W).
17. The 173rd was part of the U.S. Army Southern European Task Force (Airborne). Its mission was to secure the airfield for the air-landing of heavy follow-on traffic. Lieutenant-Colonel Thomas W. Collins, "173rd Airborne Brigade in Iraq," *Army Magazine*, LIII, 6 (June 2003) available at http://www.ausa.org/www/armymag.nsf/(all). During the 1991 Gulf War Secretary of Defense Dick Cheney proposed dropping the 82nd Airborne Division on possible Iraqi scud missile sites in the western desert 500 miles from Kuwait. His proposal was finally defeated by the Chairman of the Joint Chiefs of Staff, General Colin Powell, and CENTCOM commander, General Norman Schwarzkopf. General Norman H. Schwarzkopf, *It Doesn't Take a Hero* (New York: Linda Grey Bantam Books, 1992), 368-69.
18. Not everyone would agree with this specific assertion. It appears that 82nd Airborne Division troopers did a commendable job in a peacekeeping role in the Sinai in 1982. However, as one author has pointed out, they quickly realized that no special skills were required and many considered the battalion to have been improperly employed. David R. Segal, Jesse J. Harris, et al., "Paratroopers as Peacekeepers," *Armed Forces & Society*, X, 4 (Summer 1984), 504-05.
19. Captain David Beatty has argued that the Canadian Army has a "standoffish" attitude toward parachute operations when in fact they should be seen as viable options for the commander. He also pointed out that several of our allies "continue to plan for para-type operations" and cited the 1997 British plan to drop paratroopers into Central Africa and the U.S. plan to drop and seize Kigali airport in Rwanda. "The Future of Parachute Operations," *Army Doctrine and Training Bulletin*, V, 3 (Fall 2002), 54.
20. FM 3-90 *Tactics, Appendix C: Airborne and Air Assault*, http://www.adtdl.army.mil/cgi-bin/atdl.dll/fm/3-90/appc.htm.
21. B-GL-357-001/FP-001 Land Force Information Operations, Intelligence 2001-01-30, p. 3.
22. Modern satellite coverage would be provided by the Defense Intelligence Agency (DIA), National Security Agency (NSA), National Imaging and Mapping Agency (NIMA) or the National Reconnaissance Office (NRO).
23. It seems evident that the CIA beat the U.S. Army into Afghanistan in 2001. See Jennifer D. Kibbe, "The Rise of the Shadow

Warriors," *Foreign Affairs*, (March-April 2004), 112.
24. In Vietnam the U.S. Army's best HUMINT were probably the Viet-Cong and NVA traitors they turned into scouts, called 'Kit Carsons.' As John Keegan recently stated, "The challenge of the West's intelligence services is to find a way into the fundamentalist mind and to overcome it from within." *Intelligence in War: Knowledge of the Enemy from Napoleon to Al-Qaeda* (Toronto: Key Porter Books, 2003), 365.
25. During the Vietnam War it took thirty-six to forty-eight hours for news reports to make it to American viewers. In the Gulf War the reporting was instantaneous. The Cable News Network (CNN) was unique in its ability to provide seven days a week, 365 days a year news coverage. Now, several major U.S. news networks possess this ability and companies offer satellite imagery of better than 1 m resolution to whoever can afford it. In August 2002 commercial satellite imagery of airfields in the Horn of Africa, allegedly showing staging areas for attacks against Iraq, were broadcast around the world. They were also available on the Internet. General Richard B. Myers, "Shift to a Global Perspective," *Naval War College Review*, LXVI, 4 (Autumn 2003), 10. See also Philip Seib, "Effects of Real-Time News Coverage on Foreign Policy," *The Journal of Conflict Studies*, XX, 1 (Fall 2000), 1-12. Moreover, the scene in *Black Hawk Down* where the young child with a cell phone reported the movements of the inbound helicopters represents a sobering reality.
26. The ability to drop from 300 feet at 300 knots has at least been contemplated. Lieutenant-Colonel Richard D. Hooker, Jr., "The Airborne Division in 2010," *Military Review*, (May-June 2001), http://www-cgsc.army.mil/Milrev/English/MayJun01/insights.asp.
27. During planning for the employment of the 173rd Airborne Brigade in Iraq, American planners were horrified at the prospects of dropping the unit anywhere near Iraqi armoured divisions for fear of it being overwhelmed. See Brigadier General David Grange, Captain John Miller, et al., *Transform the U.S. Airborne Now*, 2003, http://www.geocities.com/Pentagon/Quarters/2116.htm.
28. The 82nd Airborne Division experienced significant drop error in Panama in 1989 when elements landed well off target in swamp or tall grass. The delay in 'rallying' resulted in a daylight assault instead of the planned nighttime assault. 870-5a, *Organizational History Files XVIII Airborne Corps-Operation Just Cause*, http://www.army.mil/cmh-pg/documents/panama/notes.htm; Lawrence A. Yates, *Operation JUST CAUSE in Panama City*, December 1989, http://www.cgsc.army.mil/CSI/research/MOUT/MOUTYates.asp. The 82nd launched attacks against Fort Cimarron, Tinijitis, and Panama Viejo.
29. Major Michael J. Kazmierski, *Airborne Warfare: The Study*, http://www.geocities.com/Pentagon/Quarters/2116/airbornetoc.htm; E.M. Flanagan, Jr., *Airborne: A Combat History of American Airborne Forces* (New York: Ballantine Books, 2002), 426.
30. This argument occurred in Canada the late 1970s. See Colonel W.N. Russell, "Airborne or Heliborne?," *Canadian Defence Quarterly*, VII, (Winter 1977/78), 39-43 and Colonel J.J. Painchaud, "The Heliborne versus Airborne Debate," *Canadian Defence Quarterly*, VIII, (Spring 1979), 48-50.
31. James William Gibson, *The Perfect War: Technowar in Vietnam* (Boston & New York: The Atlantic Monthly Press, 1986), 104. There is also the question of efficiency. In July 1965 the 173rd Airborne Brigade air-assaulted into War Zone D with the 1st Battalion, Royal Australian Regiment. 1,494 helicopter sorties were flown in support and the result was fifty-six Viet-Cong killed. By my count that means that 26.7 helicopter sorties were required to kill one Viet Cong. Lieutenant General John J. Tolson, *Airmobility in Vietnam: Helicopter Warfare in Southeast Asia* (New York: Arno Press, 1981), 64. Nevertheless, Tolson remained a strong advocate for the Air-Mobile concept.
32. B-GL-310-001/FP-001, Airborne Volume 1, *Airborne Operations*, 1990-03-30. The 1st Battalion, 75th Ranger Regiment did precisely this in Panama in 1989 when it dropped to secure the Torrijos-Tocumen airfield complex on the outskirts of Panama City.
33. Yves Debay, "The South African 44th Parachute Brigade," *Raids*, No. 43, (June 1995), p. 4.
34. Tom Clancy defined Special Forces as "specially selected, specially trained, specially equipped, and given special missions and support" and given "particular problems that prove beyond the capabilities of general-purpose forces." *Special Forces: A Guided Tour of U.S. Army Special Forces* (New York: Berkley Books, 2001), 3. James F. Dunnigan has defined them as "small units of men carefully selected and intensely trained for the most difficult operations." *The Perfect Soldier: Special Operations, Commandos, and the Future of U.S. Warfare* (New York: Citadel Press, 2003), 4. I consider the US Navy SEALS, US Army Green Berets, Delta Force, British S.A.S. and S.B.S. to be Special Forces.
35. Although SOF are currently favoured by the Pentagon for their ability to act rapidly with secrecy and minimal government oversight, many soldiers are leaving in record numbers for more lucrative jobs with civilian security contractors. General Bryan Brown, head of SOCOM, has indicated to the Senate Armed Services Committee that retention has become "a big issue." David Rennie and Michael Smith, "Iraq Coalition Losing Special Forces Troops to Lucrative Private Security Jobs," *The Globe and Mail*, 31 March 2004, p. A12. The S.A.S. and Delta have been on the front lines against terrorism since September 11 and suggest the staying power of SOF can only be guaranteed by expansion.
36. John Strawson, *A History of the S.A.S. Regiment* (London: Guild Publishing, 1985), 159-164.
37. Miguel Machado, "Ex 'Chute Libre 94'," *Raids*, No. 44, (July 1995), 36. Even during the early 1990s it was possible to drop a Special Forces team from as high as 35,000 feet twenty-five miles from an objective at night. Parasailing down, team members could read their maps, orient themselves and glide silently into enemy airspace undetected by radar. Alvin Toffler and Heidi Toffler, *War and Anti-War: Survival at the Dawn of the 21st Century* (Boston: Little, Brown, 1993), 93-94.
38. Brigadier G.C.A. Gilbert, "Airborne Forces in the Future," *British Army Review*, (June 1961), 11-12. As an example, Gilbert cited the following timings: a parachute company was withdrawn from the ground battle at 2000hrs to an airfield 12 miles to the rear and prepped for an airborne operation to be executed at first light the following morning.
39. For example, the Palestinian Liberation Organization (PLO) guerillas easily slipped through Israeli lines in Lebanon despite the presence of significant forces. Richard A. Gabriel, *Operation Peace for Galilee: The Israeli-PLO War in Lebanon* (New York: Hill & Wang, 1984), 196. Taliban guerillas also proved adept at eluding Pakistani forces in the border region.

— BOOK REVIEWS —

THE IRAQ WAR: A MILITARY HISTORY

By Williamson Murray and Major-General Robert H. Scales, Jr.
(Cambridge: Belknap Press of Harvard University Press, 2003), 312 pages.

Reviewed by: Major A.B. Godefroy CD, PhD.

Within months of the United States of America declaring an end to major combat in Iraq, histories of the war began to appear on bookshelves around the world. The vast majority of these were either pictorial or popular in nature, and it seemed reasonable at the time, to expect that operationally oriented or academic histories would take longer to produce. Not so. In the summer of 2003, Dr. Williamson Murray and Major-General (ret'd) Robert H. Scales, Jr., both of the U.S. Army War College, endeavoured to complete what is surely among the first historical assessments of the war. Their book, *The Iraq War: A Military History*, provides a detailed yet admittedly incomplete operational narrative of the American invasion of Iraq that began on 20 March 2004 and ended just over three weeks later with the fall of Baghdad on April 9th.

This book is appealing to both general reader and student of military history alike. A very readable account at just over three hundred pages, *The Iraq War: A Military History*, includes detailed full colour maps of the theatre of operations as well as three sections of full colour photographs covering all aspects of the campaign. Detailed notes and data on all aircraft, ships, equipment and munitions employed by each side further support the narrative, and the fully indexed text allows easy reference to both units and actions.

Murray and Scales devote the first section of their work to discussing how Saddam Hussein became leader of Iraq and the nature of his political and military power. They make no attempt to hide the facts, whether by discussing American support for Hussein during the war against Iran in the 1980s, or the horrendous and brutal means with which he controlled his own Baath party, the military or Iraqis. What is obviously apparent to the reader is that no matter what opinion one might hold about the war, the despotic regime of Saddam Hussein presented a danger to the vital interests and security of the United States if not the entire Middle East. Hussein—a villain who murdered his own people, invaded his neighbours, bought 'martyrs' to bomb and terrorize his enemies and put bounties on United Nations inspectors—was in the process of privatizing war and exporting it to Europe and North America when the Americans made their move against Iraq. Although he may have no longer had weapons of mass destruction, he still had the means to arm thousands of suicide bombers and terrorists and had clearly stated his intent to attack the West with such asymmetrical forces. From the American perspective, these threats alone justified their need to remove Hussein from power.

The next section of the book is a broad yet insightful précis of the evolution of the American military since the end of the Vietnam War. Particular attention is paid to technological modernization as well as the evolution of joint doctrine from the origins of the "air-land battle" theory through to joint task force operations as we know them today. At this point the first of many lessons the book makes is presented. Using the *Goldwater-Nichols* Act of 1986 as a starting reference, the authors conclude that the U.S. armed services have displayed an increasing ability to fight jointly over the last two decades while not compromising the inherit

strengths that each separate service possesses. The authors consider this a crucial ingredient of American tactical success in Iraq. Still, they also admit that, "the changeover is not yet complete, and in its underpinnings of doctrine and its intellectual depth the concept of joint operations remains immature. On the other hand, a completely joint force, such as the one that Canada has attempted to create, is not necessarily desirable-it could even lead to disaster."[1] Not necessarily a backhanded compliment, the authors simply point out that joint operations cannot truly occur if the organizations that make up a joint task force are themselves not organized or streamlined. Essentially, they note that while Canada may have unified its military, it has nothing near to what the United States and Britain would consider a unified fighting force.

Still, the book notes that Americans and British forces faced many of their own challenges in Iraq. The ground commanders in the war were clearly disappointed at the lack of intelligence the U.S. had on their adversary. Major-General James Mattis, a veteran of Afghanistan and commander of the 1st Marine Division, noted that he encountered considerable frustration in understanding the enemy he confronted. "T.E. Lawrence had a better idea of the personality and capabilities of his Turkish adversaries in World War I, Mattis said, than he was ever able to get out of U.S. intelligence concerning the Iraqis."[2] Throughout the war, while intelligence certainly proved valuable, all of the land commanders agreed that human intelligence, "HUMINT," and "ground truth" on Iraqi strengths and intent were often extremely lacking. This was especially the case with assessments of irregular units, secret police and Fedayeen militias packed with foreign fighters,[3] who it seemed to be the most difficult adversaries for American ground troops throughout the war.

The book does itself merit by detailing many of these tactical engagements, filling in many of the holes that received only loose official attention or media coverage during the war. As one reads through the narrative, many intense battles and firefights present themselves. Also one quickly learns just how superior the United States' firepower was. When the infamous *shamal* (dust and rain storm) struck Iraq during the last week of March, the Iraqi forces believed that the inclement weather would provide protection from air strikes and allow them to mass for a defence against the Marines and the 3rd Infantry Division. Unfortunately for Iraqi commanders, however, American technological prowess, particularly in remote sensing and precision-guided munitions (PGM), had advanced considerably since the Gulf War. As a result, U.S. aircraft were still able to deliver massive blows against Iraqi force concentrations during the *shamal*, in turn destroying a large portion of the enemy armoured forces facing the American ground advance.

Land forces also sported improved technologies. Artillery support remained constant as GPS assisted with directing fires for infantry attacks. Individual soldiers also carried GPS as well as improved thermal and night vision devices. This kit allowed them to "see" much farther during the *shamal* and provide a deadly response to attacks from Iraqi regulars and Fedayeen attempting to make use of the otherwise blinding conditions.

Though there was never really any speculation on the final outcome of the ground war, Murray and Scales bring to light many interesting and important facts that were missed by the instant generation media presentation played out to armchair generals and "military experts" back home. The authors openly criticize television sound-bite analysts who grossly overestimated Iraqi military effectiveness and often confused a complete lack of Iraqi command and control with operational and tactical flexibility and insane loyalty and enthusiasm for actual discipline and training. As battle revealed, neither Iraqi regular nor Fedayeen had any of these attributes when it mattered. As one American ground commander later noted, "Iraqi generals…couldn't carry a bucket of rocks."[4]

Murray and Scales also point out some of the general misinterpretations of operational warfare seen in the media. When American forces paused to rest and re-supply after nearly six straight days of fighting, some of it in extreme weather conditions, news agencies in the West immediately speculated that the Americans had hit the wall. As scenes of fighting in and around An Nasiriyah appeared at home, a parade of talking heads quickly judged that it was the shape of things to come, and that Americans could expect a long, hard drawn out struggle in urban environments, especially if and when U.S. forces reached Baghdad. The book, however, clearly describes the flow of operational level warfare and how such pauses were a necessary part of the overall plan. In fact, resistance was often less than expected, and though some fierce firefights ensued, there were no such quagmires as so many "military experts" had predicted.

Pan-Arab cohesion was also not as solid as pre-war speculation led many to believe. Of those fundamentalists that were taken alive, many were reticent of their treatment by those they had come to assist. "It was madness," a captured Fedayeen told British reporters. "We stayed at the front for five days with nothing to eat. I saw two dead bodies shot in the head by Iraqi soldiers. I went there to be martyr, not to be murdered by a brother. We went there to help them and all they did was shoot us in the back."[5] Such comments were common amongst foreigners as their ill trained and poorly led groups were thrown at Americans with little real effect.

The media presence also had a huge impact as land forces struggled to deal with the ever-creative methods of their foes. One British officer commented that although he was not disconcerted very much with the fact that Iraqi soldiers often played dead, lured his soldiers in closer with white flags only to shoot them at point blank range, or even regularly employ civilians as human shields, he was concerned how BBC cameras and reporters would interpret what appeared to be his soldiers wandering the battlefield shooting what appeared to be already dead Iraqis.[6] The point Murray and Scales make here is that the reality of war is so far removed from most people in the West that it is often difficult to explain certain actions beyond what they appear to convey without a context. A similar example would be the reported enemy use of ambulances to transport weapons and ammunition or the employment of hospitals, shrines and schools as command posts, air defence sites or bunkers. The "rules of war" as they are understood in the West, the authors note, simply do not seem to apply to warfare in the Middle East and Southwest Asia.

Other lessons germane to students of tactics are also present. Throughout the war, land force commanders made liberal use of ad hoc formations to respond to various situations on the ground. Essentially, more often it was the obstacle or task, not doctrinal orders of battle that determined the force composition for any given mission. Whereas ten years ago American ground force units and organizations fought largely independently of one another, it was common in the 2003 Iraq War to see army soldiers and Marines fighting alongside one another. Non-traditional tasks were also assigned to those units best equipped to deal with them. Such was the case with the 101st Airborne, where Major-General David Petraeus would test the limits of aerial manoeuvre in protecting the long lines of communication supporting the advance of the 3rd Infantry Division.

Also painfully highlighted in this book was the lack of proper combat training and efficiency within American rear echelon forces. Stretched out, thinly guarded and under the constant threat of attack, troops supporting the lines of communications often paid dearly for their tactical mistakes. Ironically, the need to adequately train clerks and cooks to fight as infantry was identified long ago (or not so long ago) by generals such as Field Marshal William Slim, who

while leading the 14th Army in Burma during the Second World War often remarked that the Japanese made little distinction between rifleman and pay clerk when they were busy overrunning your headquarters. American soldiers should have recognized that even in Iraq the front line was everywhere.

In addition to reflecting on the successes and failures of technology, the last section of this history attempts to put the post-war period in perspective. The authors rightly predict that although technology and superior firepower could win the hot war, it alone cannot win the peace. Just as in other American-led wars, winning the hearts and minds of Iraqis and helping them to build a new post-war democracy in the Middle East will prove the greatest challenge for American forces.

Although a very early and admittedly incomplete analysis, Scales and Murray are to be commended for their efforts. This book is a good read, provides plenty of thought for the land warrior and is a solid reference for the present. Only further academic studies will outshine it.

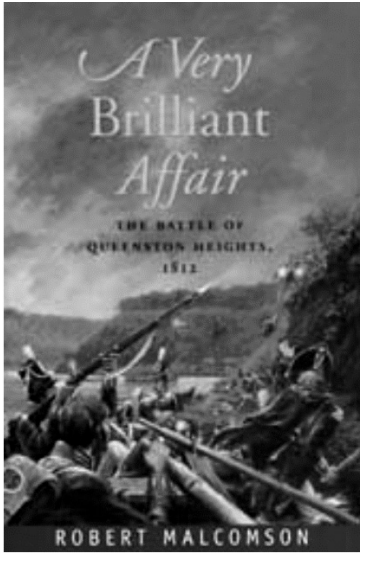
About the author...

Major Godefroy is an analyst with the Directorate of Land Strategic Concepts in Kingston, Ontario.

END NOTES

1. Williamson and Scales, *The Iraq War*, 52.
2. Ibid, 116.
3. Captured Fedayeen militia included Syrians, Palestinians, Egyptians, and even the odd Chechen.
4. Williamson and Scales, *The Iraq War*, 126.
5. Ibid, 120.
6. Ibid, 149.

A NOT SO BRILLIANT COMMANDER



By Robert Malcomson. A Very Brilliant Affair-The Battle of Queenston Heights 1812. Toronto, 2003.
ISBN 1-896941-33-8. 352 pages. $37.95.

Review by Captain S. Nolan

Robert Malcomson's A Very Brilliant Affair-the Battle of Queenston Heights is a very readable account of an episode in Canadian history that has not been the subject of much in the way of published works. This account gives the reader numerous insights into the political causes of the war, the personalities of the major players involved and a feel for the conditions faced by the average soldier on both sides.

The author is an accomplished amateur historian who has written several books and numerous articles on the naval battles of the War of 1812. An examination of the battle of Queenston Heights is his most recent book and his first book about land warfare. This book is a thoroughly researched account of the events as best as the author can determine from the numerous sources he used. His extensive research gives

credence to his narrative and to the deductions he makes about the major factors that influenced the eventual outcome. He taps into sources from both sides to sequentially organise the actions of the participants and how the minor events link together to form the whole picture.

The sequence of the battle is detailed, and the maps provided give the reader an appreciation for the events as they took place. The author shows a remarkable familiarity with the era, and his examination of one of the least examined battles of the war is complete, giving the reader a real sense of the battle as it occurred. The book has an extensive index, and it comes complete with a glossary of terms and orders of battle for all of the forces involved. Included is a bibliography of primary and secondary sources that would make an excellent starting point for anyone who wants to conduct further study into this curiously neglected topic in Canadian military history. This work is important in that it is the only modern published account of this well known battle-a fact that clearly invites more study of this topic.

Malcomson sets the stage well by explaining the political motivations of both sides as they started down the path to war. He examines the key personalities involved and how the politics of the day led to a war that neither side wanted nor had adequately prepared for. He goes into detail about the motivations, background and experiences of the battle's most famous participant, Major-General Sir Isaac Brock.

The author's stated aim, to publish a "thorough military study of the campaign and battle,"[1] is perhaps too grand of a goal. The book is more of a historical account than a military examination. Some of the tactical deductions the author makes are based on a collective analysis of several individual experiences and less on a holistic evaluation of the events. One of the author's few forays into the tactical aspect of the battle is a critique of how the Americans conducted the crossing of the Niagara River. He is of the opinion that the American crossing was " an example of how not to conduct a crossing."

Malcomson uses primary sources from American archives that describe the actions as seen by individuals involved with different compartmentalised aspects of the river crossing. The sources that he uses emphasize the confusion a little too heavily when the facts of the day are examined alongside of the individual accounts. He explains the events of the invasion in a way that makes you believe that the Americans achieved their success by chance and in a much-disorganised way. Sequentially examined, the Americans did, in fact, conduct a successful water crossing into hostile territory.

To recap, the American forces began their crossing by loading their boats before first light and crossing a river with a very heavy current in darkness. The first wave secured the beachhead and, with reinforcements, fought a decisive battle against the British attempt to repel the landing. They then went on to secure their main objective, Queenstown. After crossing approximately 1,000 men and some artillery, they captured the British battery at Queenston Heights and effectively seized the vital ground. This enabled them to control the entire area and to silence some of the outlying British batteries. Securing the vital ground and providing a secure crossing site allowed the troops remaining on the American side to cross the river for the most part unaffected by the remaining British forces. Later on, British forces were able to gain an upper hand by using artillery to attack the boats as they crossed, but this was not a failing of the Americans assault water crossing but an inability to take advantage of their initial victory.

A Very Brilliant Affair progresses from the crossing to a description of the land battle that occurred in the town and on the heights. Malcomson's main thesis for the failure of the invasion-

lack of administrative preparation and the ineptness of the American commander-is identified early in the book, and he makes an excellent case throughout for his point. He describes some of the logistical difficulties the Americans had in restructuring their regular force and mobilizing their militia for active service. He also makes an interesting point early on about how American militia soldiers could not be ordered to assault a foreign country; they were legally restrained to border defence of their territory. This point became increasingly important because a significant portion of the militia chose the minutes before their embarkation to claim their constitutional rights not to be sent to fight on foreign soil even though they had known for some time that a river crossing was being planned and that it included them. This left the Americans with no reinforcements to exploit their tactical success. After the victories of the morning, the American high-water mark came at mid-day. Without reinforcements, they lost the initiative and chose to take up a defensive posture to retain their gains. It is here that another problem with the American plan revealed itself. There were no logistical considerations for supporting the American force when it was on the Canadian side. No defensive stores were available for the Americans to improve their positions, and there was limited ammunition available for resupply.

After examining the American part in the battle, Malcomson turns his attention to the events of the day as recorded by the British and Canadian side. Although no account of the battle is complete without some focus on General Brock, Malcomson tends towards reinforcing the hero myth. Most of the material presented about Brock is glowing praise. An interesting fact provided by Malcomson is Brock's almost total lack of combat experience. Brock saw action once as a young captain and then never again. This may have played a part in his brave, albeit "glory seeking," charge into the American position. Malcomson is only critical of Brock for this charge and one other part of the British failure during the initial stages of the invasion: Malcomson gently places responsibility without blame at Brock's feet for the actions of one of Brock's subordinates during one of the first skirmishes of the battle when Brock was rushing to Queenston from Niagara-on-the-Lake. In this instance, during the initial defence of Queenston, a local commander ordered the infantry force protecting the heights to leave their post and aid the defenders of the town. This allowed the Americans to easily capture the heights and silence the artillery battery there. These critiques are merely the tip of the iceberg in terms of critically analyzing the Brock myth.

In my view, Brock made many errors attributable to a lack of experience at the tactical and strategic levels as well as a lack of presence of mind in the heat of battle. Tactically, Brock's defence of the riverfront was not well sited. He put all of his force along the river in an "everything in the shop window" approach to defence. Understandably, this was linear thinking in an age of linear thinking; however, the reader can glean from the text that Brock identified some problems with his defence. An examination of the book leads to two obvious mistakes, and a more in depth study of this battle will probably lead to the discovery of a few more. For example, Brock identified Queenston Heights as important terrain. Anyone who has been there can clearly see it is the vital ground of the area because one can hold the heights without holding the town or the river, but one cannot retain control of the town or the river if without having control of the heights. Brock knew this and placed a gun battery defended by infantry there. He should (?) have made this point his most strongly defended location and ensured that all his subordinates knew to hold that piece of ground and that other local forces should retreat to that location if deemed necessary. Essentially, the inability of Brock to convey this intent via discussion or actual defence orders may have been the cause of the initial British losses.

The second of Brock's errors was at the strategic level. He had identified the need for a strategic reserve, yet he did not constitute one from his own force. It is understood that he was denied reinforcements from higher. However, putting all of his forces along the river gave him no flexibility to react to the invasion. He was left leading a charge of about 50 soldiers, with little time to consider the size or location of the enemy, to regain a piece of ground that he should never have lost. He did not develop a basic tactical plan to retake the heights; he just rashly charged up the hill shouting "follow me boys." He could have left this duty to one of the company commanders on the scene. Instead, he led some men to their death. Even though he was the provincial military commander with all the regular and militia forces of Upper Canada under his command, he could not conduct a simple platoon attack. General Brock deserves a great deal of credit for championing the defence of Upper Canada to his superiors, who thought it to be un-defendable. Clearly, he understood theatre-level politics, but in the end, it was his lack of tactical understanding, his inability to implement his own strategic deductions, and lack of trust in his subordinates to accomplish tasks well within their job description that lead to his death

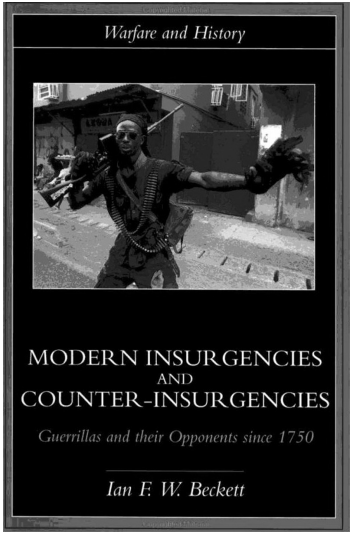
The book is a very good historical examination of the war, which leaves the reader to ponder the effects the battle had on the American way of war and what affect it had on the conduct of the US Army in the years leading up to the American Civil War. The battle of Queenston Heights has much more tactical and strategic lessons for modern militaries than are mentioned in this review. More study of this battle and, in fact, of this campaign could reveal those lessons. I recommend this book to anyone who has a passing interest in the War of 1812 or to a serious student beginning a study of this battle. It has a great bibliography with numerous primary and secondary sources, which would be an excellent starting point for developing further study on the topic.

END NOTES

1. Malcomson, p.xiii.

MODERN INSURGENCIES AND COUNTER INSURGENCIES: GUERRILLAS AND THEIR OPERATIONS SINCE 1750.

By Ian F.W. Beckett. London: Routledge, 2001. ISBN 0-415-23934-6. 268 pages. $41.95.



Review by P.K. Roberts

Despite the startling prevalence of insurgency and terrorism since the Second World War, most standard histories of warfare, including those by J.F.C. Fuller, T. Ropp and Sir M. Howard, tend to treat irregular conflict dismissively, focusing instead on conventional wars. Recent events, most notably the September 11th 2001 terrorist attacks and the Iraq War, have drawn a renewed attention to the study of insurgency. Indeed,

the prolific John Keegan has already contributed to the recent swell of literature in this field with *The Iraq War* (2004). Moreover, a surplus of new studies have been forthcoming on previous insurgent campaigns, for instance, Walton's *The Myth of Inevitable US Defeat in Vietnam* (2002), and Nagl's *Counterinsurgency Lessons from Malaya and Vietnam: Learning to Eat Soup with a Knife* (2002). While Beckett's work is consistent with this pattern, it falls into a distinct category of scholarship, with only a handful of other similar publications, interested in the holistic examination of the traditions and innovations of both insurgency and counterinsurgency from a broad historical perspective. As such, he analyzes the development of unconventional warfare by investigating a wide variety of conflicts, including the American War of Independence, Napoleon's campaign in Spain, Vietnam, Northern Ireland and Malaya, to name just a few. Thus, Beckett's core purpose is to consider these broad trends in order to fill a curious gap in the scholarship of warfare.

Beckett, a widely published historian at the University of Luton and fellow of the Royal Historical Society, argues that types of insurgent campaigns can be seen throughout the history of warfare. However, he submits that "guerrilla warfare" underwent a profound shift in the 1940s. Insurgents increasingly realized that unconventional warfare could be successfully linked, in an intimate way, with politics, psychology,and ideology, particularly nationalism and socialism. Now its ultimate goal was political, not military. Beckett underscores other critical developments, including the role of the Soviet Union in promoting unconventional campaigns, the tendency of insurgents to plan urban campaigns after 1960, and the emergence on new "spiritual" insurgency and "economic" insurgency since the collapse of the Soviet Union.

In response to increasingly frequent insurgent campaigns, armed forces had to develop countermeasures. Broadly speaking, Beckett argues that developments in counterinsurgency have mirrored patterns in insurgency. That is to say that counterinsurgency became decidedly inclusive of political, socio-economic and psychological solutions that complemented an overall military response. On one hand, Beckett's study highlights a critical lag between the development of appropriate countermeasures to new forms of insurgency and the temptation faced by established militaries to frame insurgent activity in terms of conventional war. However, he is also careful to warn the reader that assuming insurgents hold an inherent advantage is both historically incorrect and dangerous.

Beckett's work is a first-rate contribution to the study of unconventional warfare. He provides a broad chronological overview of the major developments of insurgency and counterinsurgency since 1750. Throughout, he continues to build on critical themes such as the development of doctrine, the increasing sophistication and politicization of insurgency, the application and development of strategy and tactics, the role of external factors, the goals and, to a lesser extent, the origins of guerrilla wars. Beckett relies on a wide variety of primary documents including official field manuals from the United States, the United Kingdom and France, the works of revolutionaries like Mao Tse-Tung and Che Guevara, and various field studies conducted by military experts. He also employs numerous secondary sources on specific campaigns and provides a suggested reading list at the end of each chapter organized by subtopic. Unfortunately, he fails to use footnotes or a proper list of consulted works. By way of necessity, there are obvious difficulties due to the brief treatment of so many case studies in a one-volume work. Nevertheless, Beckett succeeds in establishing chronological and thematic continuity from one chapter to the next, forming well-founded broad conclusions along the way.

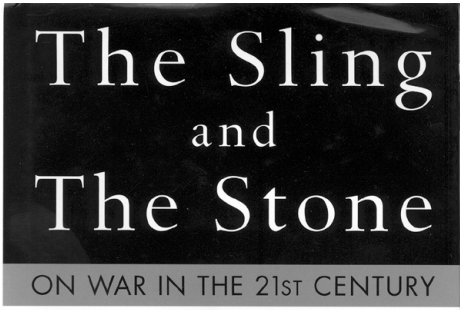
In this way, Beckett has created a well-written and comprehensive survey of the topic. This book is essential for anyone interested in a broad overview of this fascinating and increasingly relevant subject or for someone looking to place a specific case study of a single insurgent campaign in a broader context.

About the Author ...

Peter K. Roberts is currently completing a Bachelor of Arts (Honours) in History and Development Studies at Queen's University.

UNDERSTANDING THE "THREE-BLOCK WAR"
THE SLING AND THE STONE: ON WAR IN THE 21ST CENTURY

By Colonel Thomas X. Hammes, USMC. St. Paul, Minnesota: Zenith Press, 2004. 291 pages.



Reviewed by Colonel M. Capstick

In this superb book, Colonel Thomas X. Hammes, a serving US Marine Corps officer, has provided any one interested in the major issues of military transformation with an invaluable counter-point to the technology driven agenda that has dominated Western military debate since the end of the Cold War. Hammes, now an instructor at the US National Defense University (he's a graduate of the now defunct Canadian National Defence College and says good things about it), brings his solid academic background and extensive infantry and inter-agency experience to this effort. The result is a succinct, challenging and highly readable history of the evolution of warfare in the last half of the 20th Century and its impact on the "Western Way of War" in the 21st. More importantly, it provides a thorough understanding of the kind of war that is likely to dominate the next few decades. The result is a tough indictment of Western militaries' fixation on technology and high-tech weapons and information systems. At the same time, he provides strategic-level recommendations that all defence and security professionals would be irresponsible to ignore.

Hammes uses the first four chapters to describe how modern war and conflict has undergone a generational evolution over time. Leaning heavily on the work of William Lind and Gary Wilson, first presented in the October 1989 edition of the *Marine Corps Gazette* ("The Changing Face of War: Into the Fourth Generation"), he describes the successive "generations" (or modes) of warfare that have, in succession, dominated since the emergence of the modern

nation-state. Unlike some other authors, Hammes integrates his analysis of the character of war with the broader political, social and economic context of the times. This review is not the place to fully analyse this model, but the "Defense and the National Interest" web-site (http://www.d-n-i.net/) is an excellent resource for a full explanation. In a nutshell, theorists use the "generational" model to trace the evolution of war in the modern era through stages that are generally defined by the type of army, the nature of the belligerents and the relationship between firepower and manoeuvre. The "third generation" of war (3GW) in this model culminates in the dominant manoeuvre warfare that most Western armies have aspired to since the end of the First World War. (Readers should be cautious about interpreting the "generations" too literally as the model is over generalized in some areas, but it is still a useful tool for thinking about war.)

The second part of the book discusses the development of the "fourth generation" of warfare (4GW) since the Second World War. This style of war uses *political, economic, social, and military* networks to "attack the minds of enemy decision makers to destroy the enemy's political will (p.2)." Described by Hammes as "an evolved form of insurgency," it is, in his analysis, the only way for a weaker party to defeat a conventional military power. He uses a range of historical examples as different as Mao's Long March and the Palestinian *Intafadahs* to illustrate the evolution of 4GW during this period. Although there is too much material in this section to discuss each case study, Hammes draws some major lessons from his analysis. The first is that insurgencies have usually proven highly adaptive and capable of staying well ahead of the "learning curve" of conventional military forces. This often results in the inability of high-tech forces to maintain the initiative over determined, thinking insurgents. Another theme common to these diverse insurgencies is that strategic success is never purely military. Instead, victory demands a full range of coordinated social, military, political and economic actions applied with patience.

The last third of *The Sling and the Stone* begins with the emerging lessons of the Iraq War as the lead-in to a broad discussion of how industrial age Western militaries need to transform for the challenges of the 21st Century. Hammes contends that war since the early 1990s has demonstrated to almost every potential foe that challenging the conventional military might of the United States by conventional means is a sure way to defeat. As a consequence, the present and future of war for the next few decades will be defined by sophisticated and adaptive insurgencies designed to nullify the 3GW strength of Western militaries. Hammes' message is clear: 4GW is the present and the foreseeable future—military transformation *must* break out of the 3GW model to prevail.

Highly critical of the technology driven visions for US military transformation, Hammes advocates radical changes to force structure, training and education, doctrine, equipment, personnel systems and, most importantly, military culture. The alternative, according to Hammes, is to continue winning battles by using superior firepower and technology while, at the same time, losing the asymmetric war at the strategic level. He is particularly concerned with the Pentagon's ongoing fixation with technology as the main focus of concepts like network-centric warfare (network-enabled operations in Canada), effects based operations and rapid decisive operations. As his historical analysis demonstrates—reinforced by ongoing experience in Iraq and Afghanistan—the traditional "Western way of war" is simply not the

appropriate response to contemporary advanced insurgencies. In short, the kind of overwhelming force that technology brings to battles against conventional forces is simply insufficient. The reality is that the high-tech sensors that allow precision strike in open combat are often useless against insurgents living among the population, and the weapons systems that they direct cannot be used without unacceptably high risk of creating both martyrs and new recruits for the insurgency. As Hammes clearly believes, "technology does not solve problems; people do." Accordingly, the majority of his recommendations focus on people and ideas—not technology.

Available at both Indigo-Chapters on line and Amazon, Col. Hammes' book is a *must* read for Army leaders simply because it is our soldiers who will need to provide both the brainpower and muscle to prevail in the kind of warfare that Col. Hammes describes. In addition, I strongly believe that the analysis in this book strongly supports the emerging Canadian Three-Block War and "Team Canada" approaches to contemporary security challenges. It should also be read by academics, journalists and commentators involved in defence issues-especially those who persist in the belief that military capability is based on declining concepts of mass and firepower as the measure of military capability.

THE STAND-UP TABLE

Commentary, Opinion and Rebuttal

Captain Michael Chagnon writes ...

CF EMBEDDED TRAINING TEAM LESSONS LEARNED

The Afghan National Army (ANA) is currently being assisted with their training for operations by Canadian embedded trainers. After two months of the deployment on OpATHENA, it was decided that Task Force Kabul would contribute to the training of the ANA. The Canadian embedded training team (ETT) comprise 21 all ranks that have detached themselves from their previous camps and duties to join Coalition Task Force Phoenix. The team was assembled quickly, pulling together experienced NCOs and officers from their former duties within the 3 RCR Battle Group and other KMNB and ISAF positions in order fill the requirements of the team. Given the breadth of the mission of the ETT, the team consists of an array of trades and occupations, although the bulk of team members are infantry. Although some members of the team were a little disappointed to leave their sections, platoons, companies and/or office jobs behind, all looked forward to the challenges and experiences that lay ahead.

The Canadian ETT officially stood up on 07 October 2003 with the broad-based mission of training, mentoring and assisting the 1st Kandak (Battalion)/1st Brigade of the Afghan National Army in order to ensure it is mission-ready no later than June 2004. The primary aim and focus of all members of the ETT is to coach, teach and mentor the leadership of the 1st Kandak/1st Brigade. This is not the first time that the Canadian Forces have been involved in mentoring soldiers of other nations, but previous tasks were much smaller magnitude. In the last few years, individual Canadian soldiers were involved in training the armies in Sierra Lione and in the Congo. This time the 21-pers team is training an entire infantry battalion, with mentors at every level of the command structure. The team has jumped in feet first and has established an excellent working relationship with the ANA, both on a personal and professional level. With a great deal of hands on mentoring and hard work, the 1st Kandak is well on its way to eventually becoming a self-sufficient unit. Are we working ourselves out of a job? Absolutely. This task will take a lot of time and effort, but it is clear that our mission will finally be accomplished when 1st Kandak deploy on operations on their own for the first time.

As stated earlier, the Canadian ETT is responsible for mentoring, training and assisting the 1st Kandak of the 1st Brigade ANA, which is garrisoned at the Presidential Palace in the centre of Kabul. The 1st Kandak was initially formed in July 2002, making it the first professionally formed and recognized army unit ever in Afghanistan. Most of the soldiers and officers have a breadth of experience, mostly in guerilla warfare, fighting against the Russians during the 1980s. The Kandak is presently about 360 all ranks, however, its establishment strength is much larger at 867 all ranks. The ANA is experiencing ongoing problems with recruitment and with absenteeism; soldiers often leave to deliver their pay to their families in far away provinces and do not return, or they get tempted to work for warlords who will offer them large amounts of money, in Afghan terms, for their loyalty and services. Many ANA soldiers also gain a great deal of marketable skills through ANA training which makes them attractive to international

organizations which have a large presence in Afghanistan. Clearly the pay the soldiers may garner from these organizations tends to lure them in, and they are no longer subject to risky deployments and may remain at home with their families. Recruitment and retention is a large problem that is currently being addressed by the ANA in concert with the Office of Military Cooperation in Afghanistan (OMC-A).

In general, the Kandak lacks the organization and command structure that a professional army possesses in Western terms. The ANA also lacks the necessary logistics structure to ensure proper sustainment of the force. Although Central Corps is currently in the process of creating combat support Kandaks to support their line brigades, there is no "tail" at present to support front lines troops. The supply and personnel management systems are significantly deficient, which creates ongoing problems at every level and does not allow the Central Corps to achieve any degree of self-sufficiency. As a result, there is a great dependency upon coalition forces to perform routine functions such as stores acquisition, supply and pay administration. The NCO corps is inexperienced and continues to struggle for the private soldiers respect and obedience. They have been relegated to backseat positions while the officers micro-manage each and every detail. Most soldiers recognize that the NCOs have been enlisted at the same time as them, and for the most part do not have any addition training. When the Kandak was formed, soldiers were essentially picked from the masses and appointed NCOs based on their higher levels of education, ethnic background or relations to senior Kandak staff. The soldiers and officers attend a number of different schools offered at Kabul Military Training Center (KMTC). U.S. forces teach the basic recruit course while the French teach the officers. The Combat Leaders Course, offered to both Senior NCOs and junior officers is taught by British Forces. There are also a number of other courses being offered that are taught by an array of coalition forces. There are a number of officers who have also attended Russian military colleges in the past and officers routinely attend staff training courses outside of Afghanistan in such countries as Italy and Turkey. There is, therefore, virtually no set standard in both tactics and doctrine that is being taught to these troops which creates monumental challenges in terms of standardization of training across the force. This creates huge problems at the cold face as officers and solders alike are literally being pulled from every direction from a training perspective. As an example, the 1st Kandak has had trainers from different organizations since its inception. They began with U.S. Special Forces, followed by British Army trainers, more U.S. Army trainers from the 10th Mountain Division, and now they find themselves working alongside a Canadian team.

In its relatively short history, the ANA 1st Kandak has been on a number of missions throughout the country and act as the President's guards and personal escorts on a daily basis. They have also conducted security operations within Kabul during both the Emergency and Constitutional Loya Jirgas (grand councils).

AIM

The aim of this paper is to discuss the multitude of lessons that the ETT has learned during its task of mentoring the ANA. We hope that what we have learned will allow subsequent teams to begin their work more prepared and make the experience more rewarding for both the team and for the soldiers of the ANA. We have made a number of observations and will make recommendations on how to solve some of the ongoing issues that we have struggled with thus far.

DISCUSSION

TEAM COMPOSITION

The team is composed of 21 personnel from across the 3 RCR Battle Group, with a few attachments from ISAF, KMNB, the national command element and the national support element. The majority of the soldiers on this team have a plethora of experience including tours to Cyprus, Somalia, Bosnia, Croatia and Eritrea, to name only a few. In order to achieve our aim of training the different companies within the ANA battalion, the team was broken down in four smaller teams: the HQ team, two rifle company teams and the weapons company team. Each company team had one officer and three or four NCOs. In the companies, the officer's task was to work with the company commander, the XO and the platoon leaders. The NCOs mentored the soldiers and the NCOs. Within the HQ company, our team leader mentored the Kandak commanding officer while another senior officer mentored the battalion XO. Our operations officer covered-off with their Ops cell, our QM covered-off with their S1 and S4, and our company sergeant major mentored the Kandak command sergeant major and the Ops sergeant major. Also within HQ coy, our transport NCO covered off with the ANA transport officer.

We recommend a few additions/changes: First of all, the team should be established with a supply tech (MCpl/Sgt). He would act as the team storesman and would not be a dedicated trainer. This individual could also assist in coordinating with the central issuing facility (CIF) of the central corps ANA in order to ensure proper and timely issue of kit to the ANA. Second, the transport NCO should be an MSE Op. This will ensure that the ANA motorpool is properly maintained and all transport issues are tended to. Thirdly, as there is no dedicated trainer for HQ coy, the Ops NCO should be a well-rounded NCO and be able to mentor and train all platoons within the coy.

Each member of the team should have experience with method of instruction (MOI). NCOs should be at least JLC qualified and have experience teaching at a school. Officers should have also have experience being a course officer and have a good understanding of company level tactics. For the most part, trainers worked with counterparts at least one rank level above them. It is of utmost importance that the trainers have experience from previous operations. Also, the trainers for weapons coy should be trained in mortars, recce, heavy machine guns and anti-tank systems.

PRE-DEPLOYMENT TRAINING

Pre-deployment training is very important before departing on this specific mission. In our case, the team had roughly ten days to shake themselves out before beginning the hand-over with the out-going U.S. team. It would obviously been beneficial to have had some more preparation before embarking on this task. Some important topics include learning about the different weapons and weapons systems used by the ANA, and how their TO&E is broken down. It would also be beneficial to study the key players within the Kandak. Since it looks as though this will be an on-going task, it may be beneficial to get advanced language training as well as interpreters, who may not always be available when trying to convey a message to those being mentored. Further, for most training, the interpreters suffice to get our message across, but there may be a point in time when there just is not enough time to get the conversation translated. In order to get a good appreciation of where this country has come from and where they are now, the team should receive lectures on the military history of the country. Our team

received most of this as on-the-job training, and we are still learning more everyday. This is to say the cultural awareness training that team members received during pre-deployment training in Canada was not in-depth enough for the task we fulfill. The more you know about the task before deploying, the better off you are. Every team member should be tactical combat casualty care qualified and be issued the proper first aid kit given the nature of field training and austere conditions in the countryside. Since most Kandaks are being taught American war-fighting doctrine, it would be beneficial to learn more about their doctrine to ensure proper continuity and standardization of training. We also recommend that the outgoing team send members back to Canada to help with the oncoming team's training, in order to give the team the most up-to-date information on current ops and the way ahead.

EQUIPMENT REQUIREMENTS

The team deployed to the Task Force Phoenix camp with essentially their personal kit on their backs, with very limited team stores and equipment. This being a new type of mission, nobody knew exactly what kit would be required. Further, given we were deployed on ROTO 0, it was expected that we would not have all of the kit required in theatre, and it would come a little bit at a time. Within the first week, we realized that we lacked much of the force protection equipment and night fighting gear required to carry on with the different activities we would be involved in. This includes having a C9 and a 40 mm Grenade Launcher for each company team and each trainer was issued the monocular night vision goggle (NVG) and PAC4. We also received approval to wear the arid pattern tan combats. The main reason for this was to differentiate ourselves from the ANA soldiers, especially during field exercises. The ANA uniform is pattered after the US Army BDU disruptive pattern. During field live fire exercises, it allows for the ETT members to stand apart form the ANA should there be an immediate requirement for the ANA to hail one of the team members. Most of the team stores will be directly handed over to the oncoming team in order to ensure continuity. Some equipment that we are still lacking includes PAMs and reference materials, although most are available electronically. We have not been able to find any reference material on most of the ANA weapons, including the SPG-9. We also require templating equipment in order to prepare for field firing ranges as the ANA are still a long way from templating their own ranges. As for weapons, we believe we now have enough firepower to defend ourselves, if required, but recommend the issue of short weapons, such as C8s, as we do not have much room to manoeuvre inside the SUVs and pickup trucks that we drive around in. This issue should be solved shortly with the introduction of the C7 A2, which has a shorter stock.

It is also vital to maintain a rear link with our Canadian organizations. While at Camp Phoenix, we have most of the welfare needs available, but there are a few amenities that were not available. We therefore made requests through CFPSA and the NSE in order to get equipment such as TVs, DVD players, movies, BBQs, etc. in order to make life a little more comfortable at camp. The team replacing us should not run into any "life support" and welfare issues as it is intended for the 1st Brigade ANA to move to a new camp, which is currently under construction to the South of Camp Julien. Therefore, the Canadian ETT will eventually move into Camp Julien and use it as their operations base along with other US and coalition forces who are also responsible for training the 1st Brigade ANA.

RELIEF-IN-PLACE

The handover process is very important, especially when there is little to no pre-deployment training. The relief-in-place (RIP) with the U.S. team was a week-long process. It began with

indoctrination to Camp Phoenix and all of the necessary in-clearance procedures. We were introduced to our ANA counterparts and shadowed the U.S. trainers as they carried on with training. Some topics that were omitted during our hand over included briefings on policies and procedures to get support from TF Phoenix. Also, it would be advantageous to learn more about the Phoenix/U.S. way of running business. As part of the RIP we witnessed a platoon live fire attack exercise that was run by the American trainers. This gave us an opportunity to really see what level the companies were at. Even before we actually had the reigns, we already had a number of ideas of how to better conduct training and where to start. We plan on conducting a similar exercise during our handover, in order to allow our relief to see what level the Kandak is now at so they can start setting their own goals and identify other areas which may require improvement.

TRAINING

During our four months with the 1st Kandak, we conducted various types of individual and collective training. There were a few occurrences that limited the training that I will discuss later on. Since we took over, we have concentrated on allowing the ANA officers and NCOs to conduct their own training, only providing guidance and mentoring through the process. We have emphasized that the officers should come up with a training plan, and that they should focus on teaching platoon and company level tactics. We have emphasized that they should allow the NCOs to teach basic soldiering skills, and this has been an ongoing battle for a number of reasons. First, the officers lack the foresight to plan ahead more than a few days. The company commanders wait until the S3 comes up with a plan, or for the trainers to tell them what to do. The S3, unfortunately, does not get any direction from the brigade level until the last minute as a similar struggle is going on at that level. We have pushed the officers to make tentative plans and task their NCOs to prepare lessons "just in case." Second, the NCOs lack experience and skills to teach much of the basic skills themselves. In some cases, our NCOs have taught lessons, with the ANA NCOs supervising and correcting the soldiers' drills. This has allowed the ANA NCOs to gain experience and the respect of the soldiers. As time goes on, they should be able to teach lessons independently. Thirdly, the officers like to get too involved in the NCOs lessons, as opposed to just sitting back and supervising without interfering as is necessary. When they start correcting the soldiers' drills or the NCOs' directions, they undermine the NCOs' authority and embarrass them in front of the soldiers. Obviously it is important for the officers to be interested in the soldiers' training, but officer mentors have had to hold them back and get them "out of the weeds." Officer mentors have learned to distract the ANA officers during NCO training with such activities as tactics discussions in order to avoid the officers disrupting the NCO training. This is the only way to allow the NCOs to gain the respect from the soldiers. Our team CSM has also come up with his own senior NCO training, which is conducted once a week and emphasizes the daily responsibilities of NCOs within the battalion. He has covered topics such as conducting inspections, taking attendance and generally teaching lessons and how to "assist" officers. This will no doubt be beneficial to the ANA senior NCOs.

Training should be tailored toward the audience. The rifle companies concentrate on the basic infantry skills, while the weapons company should concentrate on their specific roles, while also receiving some basic skills as well. Obviously, if we were mentoring a mechanized infantry battalion, we would tailor the training towards mechanized ops. Usually the month prior to deploying on a mission, the ANA concentrates on mission specific training. Prior to deploying

for the Constitutional Loya Jirga (CLJ), where the 1st Kandak was tasked to provide security for the inner cordon of the site, we devised a training plan in concert with the ANA leadership. Initially, we asked them what they wanted and what they felt they needed to work on. Together we came up with a three- week training schedule that covered personnel and vehicle searches, urban patrolling, duties and responsibilities of a sentry, and quick reaction force (QRF) tasks. Since the 1st Kandak had conducted the same type of task at the Emergency Loya Jirga a year prior, this was a good refresher for them and much new ground was also covered. We allowed them to conduct their own lessons, and we also showed them our way of conducting this type of business. We also came up with different scenarios that allowed them to practice what they learned in various situations. They were very receptive to this type of training, and showed definite improvement over the three-week period. Once the CLJ is complete, we will carry on where we left off. Of course, this task has taken longer than expected, and we have had to push the training plan to the right, or cancel some of the exercises completely. The plan, as it stands, is to start again with pairs fire and movement and culminate with a coy live fire exercise with weapons coy support. This is the goal we have set out for them, and we will help them achieve it. The three-week period will include small arms conventional ranges and dry and live exercises to get each coy to the required level of confidence to conduct the coy attack. As mentioned earlier, there are a number of obstacles that can potentially get in the way. Besides preparing for missions, the 1st Kandak is generally given the standing task to provide the Presidential Palace Guard. This task requires up to 40 soldiers to man a number of guard posts and gates around the President's Palace grounds. Since the 1st Kandak is the regarded as the most prestigious battalion as they were the first, they get the "honour" to man these posts. The brigade trainers are doing everything in their power to ensure that this task is being rotated throughout the three Kandaks in the brigade currently occupying the palace grounds. It remains to be seen if 1st Kandak will be given any respite from this task after re-deploying from the CLJ mission later this week. Another obstacle that obstructed our training in the last little while was the religious holiday and celebrations during of Ramadan. This will be discussed in greater detail below.

RANGES AND TRAINING AREAS

We have conducted a number of conventional and field firing ranges with the 1st Kandak. With the exception of range templating, the ANA officers and NCOs have demonstrated that they can sufficiently plan for and conduct their own conventional ranges. This said, they have not been planning far enough ahead to book ranges, and we have been forced to do so on their behalf. Although the ANA has primacy on ranges over coalition forces, they are in high demand and cannot be booked at the last minute. Booking of ranges is on a first-come, first-serve basis, and we want to ensure that they do not lose opportunities to fire their weapons on a regular basis. We have been pushing the ANA to look further out in their training calendars to anticipate training needs, and they are slowly getting into the habit of doing so. We have also been forced to use the backdoor booking approach with respect to requesting ammunition. Although the ANA has a fairly large stockpile of small arms ammunition and rockets stored in their sea-cans, we are still pushing them to predict the amount required and order it through KMTC. Also, since the munitions in their sea-cans are not kept in the greatest condition, it is important for them to have good ammunition to minimize the number of misfires and stoppages that occur during live fire training. That being said, once on the range they all know what to do. They set out security, set up their own targets, break into relays, and conduct their ranges without being prompted. We have suggested different ideas for types of serials and they have incorporated

them into their ranges. We have practiced all the different firing positions and proper aiming and firing techniques, and noted that most soldiers still require a lot of practice and most lack basic principles of marksmanship. At 100 m with their AK47s, they were content with hitting the target, as opposed to getting a small group at the center of mass. Once they get the proper zeroing tools and learn how to zero their weapons, they should improve their accuracy. We have had help from the Romanians to zero their weapons as they have the same small arms weapons and the requisite zeroing tools. Once the ranges begin, we basically stand back and act as safety, while prompting the ANA NCOs and officers to do the same. While they are not qualified as RSOs by our standards, they have been getting into the practice of looking out for anything deemed unsafe, and act appropriately.

As for field firing ranges, we have for the most part planned and conducted the ranges for them. They are not at the level to template danger areas or prepare more complex range practices. They have one training area that is used for dry training and one for live ranges. The Kamari training area is about an hour drive from the palace and allows for various types of dry training. It has rolling hills and wadis that provide covered approaches and a large mountain range along the southern border to the training area that allows for excellent mountain training. Most of the soldiers are used to fighting in the mountains, as they had done so against the Russians.

The soldiers also have to be reminded several times to take aimed shots, which we realize is an issue with most inexperienced soldiers, regardless of nationality

The Wais Qarni live training area allows all heavy weapons to be fired. With mountains or hills throughout the area, you can conduct many concurrent ranges. That being said, there are only so many ways you can attack the same objective and there is a definite requirement for more training areas. With the upcoming move to Duralaman, it will take almost two hours to drive to the training areas, which seriously limits training unless a bivouac is established. There are plans in place to open up parts of the Chahar-Asiab district to use as training areas, which could potentially alleviate these problems.

The actual conduct of section, platoon and company attacks is always an adventure. It usually takes the sub-sub units two or three dry walk-through before they are ready to go live. They have learned how to break down an objective, but commanders have problems controlling their groups and pairs and rarely allow them to move independently. As discussed earlier, they often get confused with the different types of tactics they have learned from each training team that has assisted them. The soldiers also have to be reminded several times to take aimed shots, which we realize is an issue with most inexperienced soldiers, regardless of nationality. When asked why they do not take the time to aim at the targets, the common answer is that "they do not want to intentionally kill anybody, but if Allah wishes the enemy to die, then the bullet will hit him." One can't argue that thought process when you consider the strength of their religious beliefs. During the training schedule for February, we plan on conducting a number of ranges. We have seen gradual improvement in their marksmanship skills at every level since we began training, be it at the individual or collective levels. As is often said amongst the ETT members, "baby steps, baby steps."

The ANA have learned a lot from the support weapons ranges. Prior to the Canadian ETT taking over, the ANA had never fired mortars indirectly. With support from F Bty, 2 RCHA, we were able to accomplish this. Since no firing tables were available to the ANA mortar platoon,

they conducted a range that helped develop their own firing tables. They use very old Chinese and Russian mortar rounds, therefore required their own tables. They learned how to pass line to provide orientation with the use of a compass, as they do not have an aiming circle as part of their sight unit. As no types of computing devices are available, our Mortars SMEs taught the ANA the duties of the OP and CP, and how to communicate information back and forth. The Canadian ETT has had to contend with a multitude of different types of ammunition which include Russian, Chinese, Yugoslavian and a number of rounds yet to be identified. The equipment, although old, is in relatively good condition. The main problem that the team encountered was the difference in graduation of 6400 mils on our equipment and all of the ANA equipment is graduated at 6000 mils. The ANA soldiers, although very intelligent, have received very little or no formal education in mathematics, and that causes a bit of confusion in applying corrections to the sight unit. During training or live fire portions of the training, the mortar team has found that a diagram is a very valuable item with the ANA soldiers. The main goal of our training was to have the soldiers of mortar platoon conduct indirect fire, the aim was achieved, but it should be remembered that we basically had to teach a basic mortar course, a basic tech course, a FOO tech course and a communication course all at the same time using a translator. As well, it should be noted that all soldiers have been provided the first ever Afghan publication on indirect fire including firing tables.

The SPG-9 platoon had similar success on the range. They learned to deploy tactically, and have improved their handling drills. Unfortunately, there are still a number of misfires, and they do not have drills set to remedy this problem. We have witnessed that they are fairly careless with duds and misfired rounds and we are often called upon to exercise a great deal of safety oversight when conducting ranges with the weapons company soldiers.

MISSIONS

Possibly the most important topic of discussion in this paper is the subject of missions. As it stands right now, the Canadian ETT is still part of ISAF and as such we are confined to the ISAF area of operations. Therefore, if the 1st Kandak is tasked to provide security within the city limits of Kabul, then we would go along with them, as was the case with the CLJ. Unfortunately for us, the ANA battalions are often called upon to deploy to different provinces throughout Afghanistan in order to maintain a safe and secure environment in these areas which are "beds" of Opposing Militant Forces (OMF) activity. Most mission areas border upon Pakistan and ANA tasks usually consist of providing security, or conducting presence patrols. Lately however, the ANA have taken a more active role and have been conducting more offensive operations, which include tasks such as searching possible Taliban and Al-Quaida houses in conjunction with the local police forces.

On a typical mission in the outlying provinces, the embedded trainers will accompany the ANA to a firebase or safe house, from which deployments are launched such as presence patrolling and checkpoint operations. The ANA, along with trainers, will provide their own force protection in the firebase. Until just recently, the U.S. trainers were limited to staying in the firebase during offensive ops, but that is no longer the case. The 1 Kandak is expected to go on their next mission in April or May 2004. Should the ISAF AOR not be expanded, and if the Canadian ETT is not permitted to deploy outside of ISAF AOR, the Kandak will be have to be handed over to an American team during the pre-deployment and deployment period. The US team will not know the soldiers, they will not have trained extensively with them and they will

not be fully aware of the Kandak's full capabilities. This also puts additional strain on TF PHOENIX's resources, as they would have to provide their own team to go "down range". It is our opinion that if we cannot go out on mission with them, then we should not be in this business. We have developed a level of trust with our counterparts that would be lost completely if we let them go out with another team. We are deployed on a mission right now, and since this is the most important event currently happening in the country, we are definitely at an elevated risk of attack. Most reports from the intelligence sources indicated that the CLJ site is the target for a number of attacks. We are right there with them, and they know that if they would come under contact, we would be there to help. This leads us to the subject of rules of engagement (ROE). At this time, we are still under the Canadian version of the ISAF ROE, which stipulates that if necessary we can protect our own forces and coalition forces from an attack. By definition, this does not include ANA soldiers, which we would most certainly defend if they were attacked. Also, our ROE does not currently contain any guidance on offensive operations that would need to be addressed if or when we go deploy on missions with the ANA.

So far, there have not been any incidents during the Loya Jirga, and we hope that the same holds true as it sums up in the next few days. Although the Constitutional Loya Jirga has officially concluded, there are still a number of delegates on site. The ANA have done an outstanding job providing security throughout their deployment here. They have acted professionally when searching VIPs and their presence has most certainly held potential attackers at bay.

The QRF has conducted a number of rehearsals, some in conjunction with the Norwegian QRF Company. They have been called out only for precautionary reasons, preparing themselves for potential scuffles between delegates. The dedicated QRF platoon, made up of soldiers from each company, has come up with a number of SOPs that have guaranteed timely response and execution of the plans made by the QRF commander.

Upon completion of the CLJ, the Kandak will return to the Palace where they will conduct recovery operations before going on some well-deserved leave.

PHYSICAL FITNESS

Another important topic of discussion is physical fitness. We have noticed in our short time with the 1st Kandak that the general level of physical fitness is very low. It is, after all, one of every soldier's responsibilities to stay physically fit. It is a known fact that Afghans can scale mountains with very little difficulty, but they are used to the altitude. During the few PT sessions we have done with the ANA soldiers, they have demonstrated that the majority cannot run for more than 20 minutes straight and that most have difficulty doing any more than 10-15 push ups. Their idea of exercising is doing Russian-style calisthenics for 10 minutes. We have showed them a few ideas for exercises but the holy month of Ramadan and the CLJ task limited what we could do with them. Since the majority of our last month with them will be conducted at the training areas, there will be little time for PT, but this is definitely a point for improvement that should be emphasized in the future.

ADMINISTRATION AND SUPPLY

One of the areas where trainers are the most involved is in personnel management and administration. A primary reason for this is the lack of computers and the fact that no one is

qualified to operate computers. Presently the trainers handle almost everything with regards to pay, which is particularly administratively intensive. The only responsibility the companies have in this regard is to take attendance. Since the coy officers perform this task by hand, there are often many errors in recording absenteeism, and remembering who has been deployed. We have issued each company attendance books that the commanders use themselves that should alleviate this problem. The S1 trainer is responsible for inputting the attendance onto the computer program, which calculates the monthly payroll. There is still an ongoing problem with identification cards, which again makes accounting of personnel difficult. Most soldiers only have temporary cards that were issued at KMTC, and we hope to have that problem rectified shortly. At present, the U.S. trainers are the only ones who can actually handle the money, as it is the U.S. government who is paying these soldiers. This has not been a problem for the Canadian ETT as we have had a U.S. major accompanying our team for the last 2 months.

The ANA soldiers make very little money, which is one of the main causes for recruitment shortages and the high desertion rate. A new soldier fresh out of KMTC earns $70 USD per month. In general, each promotion gives them an additional $15 monthly, and a year in rank adds $5. Officers in general make quite a bit more money. A second lieutenant starts at $163, while the commanding officer of the Kandak makes $350 per month. Comparing this to the $400-450 monthly that the ISAF interpreters make, it is obvious why the soldiers are complaining about the amount of pay they garner. While on deployments, soldiers make an additional $2 per day, which essentially doubles their monthly pay.

Besides pay, as with our army, leave is one other thing that any soldier can look forward to as compensation for their hard work on mission or otherwise. According to the Central Corps policy, each soldier is entitled to 2.5 days of leave per month. On top of that, the commanding officer can authorize more leave depending on where the soldier's home province is located. After deployments, the commanding officer may authorize 4 days leave for soldiers who live in the immediate area, and the soldiers who live in the remote provinces may be given up to 15 days leave. After pay days, soldiers are usually authorized time off to go home for a couple days so they may deliver some of their pay to their families. This is a necessity as there is no banking system in the country to this point, there is clearly no means of dumping money into a bank account to have it accessed by their families in their home communities.

The battalion-level supply system is slowly coming together. The company stores rooms have all sorts of kit stored in them from weapons to ammunition, radios to first aid kits. When we took over from the U.S. team we conducted detailed inventory of each company's holdings and noted a great number of deficiencies. They were a mess with boxes and weapons of every shape and description piled haphazardly. We suggested they empty them out, catalogue their inventories and reorganize their layouts. The Kandak level stores are held in sea containers, and their condition was very much the same. Ammunition of different types was stored together with winter jackets and boots, which was clearly disconcerting. Our S4 trainer ensured each sea can was emptied out and reorganized in turn. Each box of ammunition was inspected and we identified that most of the ammunition was non serviceable. Many of the rockets inspected, as an example, were either rusted or were missing fuses.

Most of their personal equipment is in fairly good condition. They keep their weapons in immaculate condition, and now clean their company stores during their weekly maintenance day. All of their equipment, clothing, and ammunition have been donated from countries around

the world, and there is very little in the way of replacement parts. We are still trying to get the NCOs and officers to report any non-serviceable equipment, and identify the problems properly. Unfortunately, they do not have manuals to reference part numbers and names. For example, they simply report that their AK47 does not fire or that the radio does not work.

The brigade and Kandak motor pool has similar problems. The soldiers keep the vehicles clean, but there are no dedicated mechanics and soldiers tasked as vehicle drivers have very little mechanical expertise. Within the Kandak, the vehicle holdings include 30-pax Mercedes trucks, WAZ jeeps, KAMAZ troop carrying trucks and Ford Ranger pick-up trucks that have been donated by the U.S. government. When a vehicle breaks down or has an accident, they expect the Americans to replace them immediately, which is clearly unrealistic. Inexperienced driving is a huge problem for the ANA. Most soldiers have never been behind the wheel of any type of vehicle and very little formal training is available for the ANA at this point. This is exacerbated by the fact that the vehicle fleet is not common throughout the battalions and new vehicle types are being donated. For instance, the US recently donated five hundred 2 ½-ton and 5-ton trucks. Of course, this presents huge training challenges for the ANA to ensure the requisite training is delivered on these vehicles before delivering them to the line battalions. With more experience, and with plans to run drivers and maintenance and vehicle technician courses, the future does looks brighter.

As mentioned early, there have been a few events beyond our control that have interfered with training. Besides absenteeism, and the palace guard task, we ran into a wall when Ramadan started in late October 2003. With little warning, we had to change our training plans in order to meet the daily schedule as little training activity could realistically occur during the holy month. During Ramadan, Muslims must fast during the day and conduct prayers more often, which seriously limited the amount of physical exertion the soldiers could do during the run of the day. Therefore, there was no PT, and daily training was conducted from 0800 to 1200 hrs. This reduced schedule only allowed for short periods of instruction to be carried out on most days within the Presidential Palace grounds. There was not enough time to deploy to the training areas or to the ranges. Also, in an effort to respect their culture, the trainers also refrained from eating, drinking and smoking in front of the soldiers.

LESSONS LEARNED

The Canadian ETT assumed this mission and all of its related responsibilities with very little warning. Although the team assumed this task perhaps not as well prepared as we would have liked, we learned a lot during the first few months.

As for any mission, there is a requirement for extensive pre-deployment training. This training should be tailored for the exact task at hand, and as mentioned before, should include foreign weapons training, advanced language training, and familiarity with U.S. Army doctrine. There is no current need for Special Forces training as we are teaching standard NATO tactics and not guerrilla warfare. As long as proper communications channels are kept between outgoing and incoming teams, we can ensure good passage of information and ensure that the most up-to-date training can be conducted which is consistent with the current level of training that the Kandak has achieved. There should be no requirement to roll back the clock and start the Kandak at basic levels of training every time a new embedded training team hits the ground.

We realized that the 1st Kandak is a very young organization and it will take time and patience for them to mold itself into a self-sufficient professional battalion. The NCOs need experience

and the only way to accomplish this is for the officers to give them responsibilities and allow them to do what NCOs do. Of course, they will make mistakes, but that is how they will learn. As long as the officers do not let them fail and let them embarrass themselves in front of their soldiers, then the NCOs will benefit from everything they tackle. We recommend that the senior NCO training continue with following teams in order to teach the senior NCOs the lessons that our senior NCOs learn from watching others in action. These lessons are not taught on courses, but are integral to properly conducting daily business at the company and platoon levels. Canadian NCOs have always had someone to look up to and learn from. Being a new army, the first soldiers of the 1st Kandak have not had this luxury.

Officers need to start looking ahead a bit further and take charge of the planning for training being conducted at all levels. With clear guidance and direction from brigade and battalion, company commanders must be able to identify what needs to be done in order to accomplish the mission. The ANA have a tendency to step back from any planning and expect that the trainers to do everything for them. They will never be able to work independently of training teams if they cannot think and plan for themselves.

The most important issue at hand involves the team being authorized to go deploy on missions alongside our ANA counterparts. If we are to remain in this business and have credibility as trainers, then we must be allowed to follow the soldiers to the outlying areas of the country so we may carry through with our mentoring responsibilities there. In order to do this, the ISAF AO must be expanded, or the embedded trainers must be detached from ISAF. As we still require administrative support from the NSE, we still need affiliation with ISAF, but command and control authority should be fully given to the CJTF-180 and TF Phoenix chain-of-command through Operation ENDURING FREEDOM. Also, new ROEs would have to be promulgated to the team for the purposes of mission specific deployments.

CONCLUSION

Having worked with the ANA for the past four months, we consider that we have accomplished a number of good things and that the ANA has benefited from our presence here. This said, we too have benefited greatly from our experiences and have learned a great deal from the ANA.

We hope that these lessons learned will enable following training teams to have a rewarding experience while not having to worry about starting from scratch. It is a great opportunity to work and train with foreign soldiers and we will remember this for the rest of our lives. The Afghan people have a long road ahead of them. After years of fighting, this war-torn country is finally in a position where it may begin to rebuild itself. Along with legitimate government and competent policing, building an army is one of crucial cornerstones required to ensure a safe and secure environment in this country. This will clearly require a great deal of support and hard work, but the ANA is well on its way.

The daunting task of forming a professional army in Afghanistan will require a great deal of continued support from coalition partners and the international community at large. The security environment in this country is far from secure as warlords and ethnic leaders with criminal ties continue to rule much of the country. With help from their government, and mentorship from embedded trainers, the ANA will, one day, be able to reach their goal of being an independent, self-reliant, professional army. But until that day comes, we will be there to do

what Canadian soldiers do best: pass on our knowledge and experience, allowing our counterparts to develop themselves into better soldiers in the service of their country.

About the Author ...

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Major M.F. Notaro writes ...

THE AIRSPACE INTEGRATION OF MINI UNMANNED AERIAL VEHICLES (UAVS) IN AN OPERATIONAL THEATRE

BACKGROUND

UAVs have begun to proliferate in the Land forces. Doctrine and the tactics, techniques and procedures (TTPs) for operating them has been slow to develop. Although the larger strategic UAVs have well defined doctrine and TTPs, the newer mini and micro UAVs have limited documentation on how to employ them. The documentation is non-existent when it comes to airspace coordination of the mini and micro UAVs.

The German battalion group employed the Aladin mini UAV during OPERATION ATHENA. The UAV was mainly used in the German area of operations (AO) in direct support of their operations. There were times when they have been tasked in support of Brigade operations. For the first year in theatre, they informally managed the operation and airspace coordination aspects of the mini UAV. The increased awareness and usage of the airspace necessitated a formalization of the procedures to integrate the mini UAV into the airspace. The specs on the Aladin were as follows:

Type: Mini UAV / Close-in Range Imaging Airborne Reconnaissance Drone
Operating altitude: Up to 3000ft AMSL
Flight altitude: 100 to 600ft AGL
Operation: 2 person
Engine: 300 W electric motor
Dimensions: Span width and length: 150 cm each
Weight: 3 kg
Sensors: Colour zoom camera, optional sensors for twilight
Speed: 45 to 80 km/h
Operation radius: 5 KM
Airborne time: 30 min
Landing: Autonomous drop landing

AIM

The aim of this paper is to describe the Kabul Multinational Brigade's (KMNB's) Airspace Coordination Centre's (ASCC's) approach toward the formal integration of the mini UAV into an operational theatre's airspace.

DISCUSSION

Due to the fact that there were no radars in the International Security Assistance Force (ISAF) AO, the KMNB ASCC relied on procedural control to coordinate the airspace. Procedural control is dependant on a combination of mutually agreed to and promulgated orders and procedures. Airspace coordination is provided to prevent mutual interference from all users of the airspace, facilitate air defence identification, and to accommodate and expedite the flow of all air traffic safely.

The established principles of airspace management used in manned flight operations normally apply to UAV operations but may be waived by the air coordinating authority (ACA). For larger UAVs (tactical, operational or strategic) UAV airspace requirements generally do not differ from other low performance aircraft. The UAV may be difficult to acquire visually and does not provide a clear radar signature, presenting a potential hazard to high performance aircraft. To limit the hazard to fixed-winged aircraft and helicopters, separation between manned aircraft and UAVs is required. UAV missions are both pre-planned and immediate in nature. Pre-planned UAV flights in support of the bde should be included in the joint force air tasking orders (ATOs), special instructions (SPINS) or airspace control orders (ACOs). Immediate UAV missions were coordinated with appropriate airspace control agencies (ASCC, CJTF-180 A2C2, Combined Air Operations Centre (CAOC) and Kabul Afghan International Airport (KAIA) tower) to provide safe separation between manned and uninhabited aircraft. UAVs are launched from UAV launch and recovery sites (LRSs). After launch, the UAV can climb to flight route or transit altitude (normally above the coordination altitude) over the LRS, or climb enroute to the UAV's mission area. Once at the mission area, the UAV climbs or descends, as required to conduct its mission within its specified restricted operation zone (ROZ). During the UAV mission, route and altitude changes may be required. Any changes must be coordinated with the ASCC. Upon mission completion, UAVs return to their LRS again using a UAV flight or transit altitude. The following airspace control measures (ACMs) should be used to de-conflict UAVs and other airspace users:

♦ **LRS ROZ**. A ROZ should be established for a LRS. Establishing a ROZ around the LRS can facilitate launch and recovery of UAVs from an LRS that is not located at an airfield. The ROZ around the LRS is normally circular, centred on the launch site, is 2 to 3 kilometres in diameter, and allows the UAV to climb and/or descend from transit altitude over the LRS.

♦ **Search ROZ**. A search ROZ may be established around the UAV's mission area to facilitate mission accomplishment. The size and altitudes for the UAV mission area ROZ is dependent on UAV capabilities and mission requirements.

♦ **Special Corridor/Transit Corridor (SC/TC)**. If the UAV must transit an area to get from it LRS to its search area, then a SC/TC should be designed. The corridor width should be sufficient for the UAV to complete a 180-degree turn. This ensures the UAV remains in the corridor if during an emergency it must return to the LRS prior to arriving at the search ROZ. The corridor may be at a standard altitude or it may be larger to allow the UAV to climb to altitude while on route to its search area.

The difficulty for coordination arises for the smaller UAVs (mini and micro). The nature of these UAVs is that they are an integral piece of equipment for the company level and below. Their use is dictated by tactical requirements and is rarely planned. The company or platoon commander employs these UAVs to see what is across the street or behind the next wall or hill. His decision to use the UAV is based on his requirement for situational awareness or to gain the tactical advantage without having to risk troops' lives. The relative small size and lightweight make them ideal for these types of immediate low-level tasks.

The nature of mini UAVs is that they are an integral piece of equipment at a tactical level where employment is dictated by tactical requirements that, unlike UAV, are rarely planned.

These UAVs have an operational radius (up to 5 km) and an altitude (up to 600 ft AGL) that is a cause for concern for rotary wing assets in the ISAF AO. Most rotary wing assets are restricted to 300 ft and below in theatre (ANA, OGA, German and CJTF -180 helicopters). This is mainly for tactical reasons due to the Man Portable Air Defence System (MANPADS) threat in the AO. Ideally, altitude separation would be used but for the safety of our rotary wing assets, but to fly them higher would put the aircraft at undue risk. To restrict the Aladin mini UAV would take away a vital asset to the German Battalion Group and the Bde, adding to their risk. The airspace issue is further complicated by the Kabul airfield and its many fixed wing users and possible active close air support (CAS), which can operate as low as 100ft AGL.

A balance must be achieved to minimize the risk to the airspace users in order to achieve a safe airspace environment. To overly restrict any one user would place undue risk to the other and ultimately the ISAF mission. The two issues, which must be addressed, are the conflicts between the rotary winged assets in theatre and the mini UAV, and the airfield operations and the mini UAV.

In Kabul, the two issues, which had to be addressed when employing mini UAVs, were conflicts between rotary winged assets (flying below 300 ft AGL for tactical reasons required) and the mini UAV, and the airfield operations (with aircraft flying as low as 100 ft AGL on approach vectors downtown) and the mini UAV.

ROTARY WING ASSETS AND THE MINI UAV

In the rare case where the mini UAV is to be used for pre-planned missions then an airspace control measures request (ACMREQ) must be initiated to reserve the airspace for its use. Normal UAV SOPs will apply as described above. For unplanned missions a series of pre determined launch and search areas need to be defined and disseminated to all airspace users. Fifteen minutes prior to any launch, the KMNB ASCC must be informed, through the bde comd net, so an advisory can be sent to all other users that the mini UAV is operating in the predetermined airspace. This will allow all other airspace users to either avoid that airspace or be vigilant for the mini UAV while they fly in the airspace that the mini UAV is known to be operating (see and avoid). The Aladin does not have night capability so it is restricted from night-time operations.

To accommodate unplanned flights of mini UAVs a series of pre-determined launch and search areas need to be defined and disseminated to all airspace users. Advisories that mini UAV will be in use in a certain area are sent to other airspace users 15 minutes prior to launch so that they can avoid that airspace or be vigilant of the mini UAV presence (see and avoid).

KAIA AND THE MINI UAV

The Class D airspace for KAIA covers the vast majority of the ISAF AO. To simply restrict the mini UAV from operation in that airspace is neither reasonable nor practical. Based on take off and landing areas of the runway and altitude and speed calculation it is reasonable to restrict mini UAV operation on the approach and take off vectors to the airfield. The restriction will apply to both ends of the runway based on 22 degrees left and right of the centre line of the runway out 4 nm from the end of the runway. Special permission must be sought from the KMNB ASCC if there is an operational requirement for the Aladin to fly within this box. This should only happen on the comd 's approval. As above, planned missions with ALADIN will be conducted via an ACMREQ. KMNB ASCC will ensure the KAIA tower is advised for all unplanned Aladin missions.

While restricting mini UAV from use of Class D airspace associated with a downtown airport is impracticable in this PSO scenario that includes a terrorist threat, a restriction at the approach and take off vectors to the airfield and for 22 degrees left and right of the centre line of the runway out 4 nm from the end of the runway should be applied. Obviously, special imminent circumstances can lead to a requirement to fly in this airspace.

CONCLUSION

The ASCC has considered all of the above principles when developing the ISAF airspace control system. The integration of the mini UAV is an important asset to the battalion and one that required a quick process to integrate into the airspace control system safely. The airspace of ISAF defines a crucial battle space dimension that all components of the joint and multinational forces use to conduct their missions. Friendly aircraft, helicopters, surface weapons, and UAVs must share this airspace without one element hindering the application of combat power by any other element. Joint airspace control primarily strives to enhance air, land, and maritime force effectiveness. This policy was immediately adopted to further refine and improve the safety of the KMNB airspace.

About the Author ...

Major Mike Notaro was the G3 Air Defence, Airspace Coordination Centre, during Op ATHENA Roto 0. He enrolled in the Canadian Forces in Toronto in 1986, graduating from CMR St Jean in 1990, and has completed the Air Defence Instructor in Gunnery course. Major Notaro is currently the CO 1st Air Defence Regiment (Lanark and Renfrew Scottish)

Refs:

A. B-GL-372-002/FP-001 Air Defence Artillery Doctrine
B. Joint Pub 3-55.1 Joint Tactics, Techniques, and Procedures for Unmanned Aerial Vehicles (UAV)
C. FM 3-52 Army Airspace Command and Control in a Combat Zone
D. Annex V KMNB Airspace Coordination to KMNB IV Op O 014

Major R.A. Roach writes ...

ON REGIMENTS, CORPS AND TRANSFORMATION

I was heartened to read LCol Dave Banks' article, "A Single Combat Branch?" and equally pleased with LCol Harry Bondy's comments on that article in *The Canadian Army Journal*, Vol. 7, No. 2, Summer 2004.

I believe that LCol Banks' assumptions are sound and that, ultimately, the Army's relevance and success will be measured by how well we are able to adapt to a constantly changing environment, encompassing threats to Canada (in the broadest sense) and socio-political developments at home and abroad. A single branch would support increased flexibility in combat development and transformation activities.

The historical perspective presented fails to capture the ascendancy of the "corps" during and immediately following WW II. We are living in the shadow of a branch (corps) system, which was developed to exploit the war fighting potential of the industrial age. I contend that the branch system has weakened the regimental system in Canada by becoming, in effect, uber-regiments and creating unnecessary tension between commanders and COs through emotionally charged, functionally based "tech-nets" to control personnel management and the combat development process. I posit that strong, healthy regiments stripped of corps affiliation could emerge in the formation of a single Army branch.

I agree with LCol Bondy's argument that a single combat branch does not go far enough to transform the Army and that "soldiers first" should also encompass the notion of "soldier first." Army oriented combat support and combat service support personnel would not only strengthen land component capabilities but would also enrich and promote joint endeavours by ensuring that all Army personnel bring a common understanding of the land environment to the joint table.

I do not think that LCol Banks need be so concerned about the ability to generate ISTAR soldiers. A well-rounded soldier, with the right aptitude and good training, will make a superior reconnaissance or surveillance specialist when compared to a soldier brought up in a functional branch.

Similarly, transforming the militia need not be an onerous task. Again, I would argue that it is the linkage to corps that causes the most tension in this arena. In fact, I believe the reserve should be launched to exploit in this endeavour. Currently, personnel and training are effectively being managed as a single "branch" in each LFA. The requirements of LFRR are heavily influencing the future of militia units and inter-corps transfers of regiments have already occurred to balance force generation needs. Training to a common "close combat" skill set, prior to becoming a specialist, would enhance militia training and employability.

Building a single Army branch would not be easy to sell CF wide but would certainly ingratiate us with a Treasury Board that is trying, desperately, to reduce the number of job classifications across government. A model that would have all officers and soldiers pass through the Army "crucible" prior to specialty trades training is highly desirable. (Particularly in light of the growing asymmetric threat and non-contiguous operations.) In practice, this could be achieved in the short term by using voluntary occupational transfer to achieve the desired result, with

individuals moving to a "purple" branch. In the longer term, the Army branch could develop structure and process to cater to the personnel and career needs of diverse specialties while meeting CF requirements to fill joint and CF billets.

It is time we exploit, not justify, the regimental system to achieve the objectives of Army transformation. Canadians have a rich "army branch" heritage with the Canadian Mounted Rifles, deploying tactical self-sufficient units at the turn of the last century. (A stretch, but illustrative and rousing.) We have the opportunity now to ride hard into the future, drawing on the spirit, tenacity and skill of our forebearers.