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David with the Head of Goliath, by Michelangelo Merisi da Caravaggio.

## THE END OF ASYMMETRY: FORCE DISPARITY AND THE AIMS OF WAR

by Doctor Peter H. Denton

Asymmetry is no longer a useful concept in the analysis of 21<sup>st</sup> Century warfare. A more accurate analysis emerges from recognizing the fundamental disparity between opposing forces and the system implications of such a disparity in force. This in turn leads to a plausible redefinition of the structure and mission of the Canadian Forces (CF) abroad.

### Introduction: The End of Asymmetry

Asymmetry is a concept commonly and mistakenly used in the analysis of 21<sup>st</sup> Century warfare, even though it is as old in human terms as conflict itself, and is therefore not unique to current situations. Like the biblical story of David and Goliath, ideally, combat has always been asymmetrical, for opposing forces tend to fight on equal terms only if battle cannot be avoided.

'Symmetry' and 'asymmetry' are the ends of a continuous spectrum that assumes a common measure between comparable things. Whatever the measure used,

something is more or less symmetrical or asymmetrical when it is compared to something else. When the comparison is between apples and screwdrivers, or between oranges and circuit boards, however, there is little value in using asymmetry to describe their relation.

Because such comparative analyses of 21<sup>st</sup> Century warfare are not fruitful, in order to understand current and potential armed conflict better, asymmetry needs to be replaced with the systems concept of "force disparity."

Force disparity is an absolute disjunction between the forces available to the opposing sides. It is not just difference in degree, but in kind. Force disparity in the context of 21<sup>st</sup> Century warfare recognizes that combatants may be so utterly different in terms of the

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nature and equipment of their respective militaries that nothing useful or meaningful is to be gained by a comparison of the two sides. Either the military forces are incommensurable – what value is there in comparing *Hellfire* missiles against

pointed sticks? – or the disparity is so absolute that the two sides will never be fielding forces that are even remotely comparable in numbers, equipment or training.

Force disparity by itself is merely a descriptive term – stating what should be obvious to even the most casual observer. What is not so obvious, and what presents serious challenges for global peace in the 21<sup>st</sup> Century, are the system implications of force disparity. Force disparity entails a non-linear method of combat on both sides for the accomplishment of war aims, and emphasizes how, in a systems environment, individual actions can be leveraged to create disproportionate effects.

### **Force Disparity and the Aims of War**

**W**ar aims are related to the means by which they can be achieved. In a conflict between two powers that can field an equivalent military force, war aims are likely to be complementary. One country may wish to acquire territory, another, to defend it. What makes the available forces comparable renders the war aims complementary. Even when there is a preponderance of force on one side (the inevitable asymmetries of combat), as long as there are comparable forces, war aims are complementary.

Force disparity in 21<sup>st</sup> Century warfare, however, creates two distinct phases of conflict in which the overall war aims of both sides change significantly between phases.

In the primary phase, the war aims of the dominant force are apt to be immediate, clear, straightforward and territorial (in a classic or traditional sense of warfare). For the realization of these war aims, the direct application of military force to specific objectives is required, and success is easily measured by how quickly these objectives are attained while minimizing friendly casualties and maximizing those of the enemy.

Once these primary aims are accomplished, the war aims in the secondary phase concentrate on maintenance, systems change and disengagement. Maintenance involves maintaining force disparity and, therefore, force security in a post-combat situation. Systems change involves changing, replacing or rebuilding the political, economic and

**“Conflict involves the local application of force intended to leverage system effects dangerous to the dominant force.”**

social systems affected by primary phase conflict. Disengagement obviously is the end result of these operations, in which the intention of the primary phase force members is to do their jobs and go home as quickly as possible.

In the secondary phase of conflict, however, the dominant force will have fewer opportunities for the direct application of overwhelming force, and the benchmarks for evaluating success (such as the war aims themselves) are necessarily more ambiguous than in the primary phase.

If we then turn to the war aims of the inferior side in a situation of force disparity, the war aims are not complementary with those of the dominant force in either conflict phase. In the primary phase of conflict, conceding immediate and inevitable defeat, the war aim of the inferior side is to survive hostile contact with the maximum military capacity still intact, and to position itself for the secondary phase.

The secondary phase war aims of the inferior side, unlike those of the dominant side toward stability and disengagement, instead depend on engagement and escalation, with direct and focused hostile activity that is clear in terms of short-term objectives. Conflict involves the local application of force intended to leverage system effects dangerous to the dominant force. The absence of clear long-term goals in the secondary phase for the inferior side has no effect on the identification and prosecution of local targets.

For the inferior side, whether the conflict is religious in motivation – or political, economic or psychological – the ‘Cause’ is used to discount the significance of casualties regardless of their rate. Nor is the failure to achieve an end to hostilities something that by itself undermines the will to fight of the opposition – if the immediate secondary phase war aim is simply to hurt the invader, then (given the opportunities to lash out presented by multiple targets), it can be judged a success on a daily basis. Force disparity creates a situation in which the inferior side cannot lose – when the dominant side inflicts casualties, it is to be expected; when the inferior side inflicts casualties, it is a victory for the rebels.

While this is not a new phenomenon – after all, it could easily be described as classic guerrilla warfare – in the context of global economic, political and social systems – and thanks to the immediacy of electronic communications – local actions are undertaken primarily to leverage a variety of effects at a distance from the combat zone.

Such immediate secondary phase war aims, understood in terms of complex and interrelated systems, allow for the choice and use of leveraged weaponry – like box cutters on passenger jets – that have system effects far out of proportion to their initial impact.



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For many years, success in battle was often equated with an overwhelming application of force. Soviet shelling of Berlin, April 1945.

### Force Disparity and the Weapons of War

The system effects of force disparity in 21<sup>st</sup> Century warfare require a reconsideration of the weapons of war and the dimensions of the battle space.

The conundrum posed by force disparity is that superior firepower may be the means of tactical victory, but may also guarantee longer-term, strategic defeat. To this point in history, the side with the technical advantage – whether the larger guns, longer pikes, faster chariots, better ships, more skilled sailors or whatever – has tended to gain ‘victory,’ but this is no longer the case.

Not only have the parameters of victory changed in both present and potential conflicts within global culture, but without a consideration of the ‘softer side’ of contemporary warfare, defeat may result from an inability to manage the system of conflict, especially if there is a fundamental force disparity in play. However spectacular the successes in the primary phase of conflict, defeat in the secondary phase (especially when the secondary phase war aims of the dominant force are ambiguous) results not from a shortage of force, but from its misapplication.

The misperception that superior firepower wins wars as well as battles is a consequence of a larger misperception common in Western culture that technology is ‘primarily about widgets.’ A different conclusion emerges from an understanding of technology as instrumental knowledge – knowledge used to a purpose. It is actually the knowledge, and the use to which the knowledge is put, that are of primary importance,

not the tool itself. In the absence of certain widgets, the same goals may be accomplished by other means.

The realization that subtleties rather than firepower win secondary phase conflicts fundamentally changes the potential means by which war aims may be achieved, and even what war aims can be realized.

This is not merely a case of preferring ‘spin doctors’ to A-10s. The global economy presents a multitude of examples of how the manipulation of non-physical entities can lead to concrete consequences. Investor

confidence, consumer behaviour, and public opinion are all ‘unreal,’ but changes in these things lead to real social, political and economic consequences.

For example, the psychology of all combatants is increasingly significant because warfare in the post-modern age inevitably involves whole populations, and the leveraging of effects translates a local defeat or victory into something that affects a much larger group of people.

For example, suicide bombings are intended, not to inflict damage or casualties in the first instance – unless as directed assassination – but to leverage their effects in a global political context. The primary force multiplier is the conveying of information to a larger public not as much at risk from the physical threat of future attacks as from the psychological implications of their future possibility.

Were there to be an absolute ban on reporting of the event – and especially of those claiming responsibility – and the determination not to allow changes in policy as a result of such acts – their frequency would not be reduced, but the leveraged effects would at least be minimized, if not eliminated. The reason these attacks are most frequently aimed at democratic societies is self-evident, given the apparent influence that public opinion and a free press has on decision-making by government or other entities.

The dominant side needs to use the system effects of force disparity to leverage positive effects in order to prevail in the secondary phase of conflict. Providing the inferior side with some tangible reasons for hope of a better future tempers the less rational dimensions of



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The terrorist as a force multiplier – Hamas militants.

their secondary phase war aims, and permits the construction of some means of realizing that hoped-for future. Building schools, digging wells, or repairing roads and bridges are not merely humanitarian aid, as is often the representation, but are also pragmatic extensions of the dominant side's combat superiority.

If improved living conditions soften the resolve of the inferior side, then to stay in the fight in secondary phase warfare, the 'opposition' must, paradoxically, deny such things to its own population under the guise of resisting the enemy. This tactic, in the longer term, must, of course, inevitably undermine the opposition's popular support.

### System Effects of Force Disparity

Force disparity needs to be recognized as a dominant dimension of conflict in the post-Cold War period. The successful resolution of conflict in the 21<sup>st</sup> Century requires a much more sophisticated response than merely an increased investment in new and more sophisticated primary phase military hardware. In fact, such an investment of scarce resources means they are therefore denied to other initiatives in which they could be used to resolve secondary phase conflict, or to prevent local conflicts from being leveraged into larger ones.



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Technological enhancement of weapons systems, while it allows for the exciting prospects of casualty-free conflict for the dominant side, is anything but cheap, and creates the modern equivalent of the knight in expensive technological shining armour. Given the increasing rapidity of change in technological systems, the current knight will maintain superiority only for as long as it takes a much weaker opponent to find the chinks in

that armour. While the traditional view would encourage the advent of the longbow or the gunpowder weapon as the reason for the demise of the mounted knight, ‘slipping his horse a mickey’ would have accomplished the same result.

Further, such technological enhancement does not improve the circumstances of the dominant force in the primary phase of combat. In a situation of force disparity, the dominant side was going to win anyway – a few more gadgets or somewhat fewer casualties make little difference outside the confines of a video game perception of combat in which the goal is a higher score. If the dominant side cannot continue its advantage into the secondary phase of conflict, then none of the gadgetry is of real value, and the resources expended on developing that gadgetry might have been put to better use at both tactical and strategic levels.

The tactical and strategic implications of force disparity therefore require a focus not on one’s strengths, but on one’s weaknesses. They require an emphasis on exploring the vulnerabilities of whole systems, not narrowly defined battle space systems, to identify what the assaults might resemble that would leverage or multiply the initial hit into something more deadly.

They require an emphasis not on primary combat systems – which are already overwhelming – but on secondary combat systems to deal with the ambiguities of the secondary phases of conflict. There is a critical distinction between primary phase warfare intended to obtain direct results and secondary phase warfare, where the intention of the conflict is to leverage indirect effects in terms of the social, cultural, political or economic systems involved.

In a situation of force disparity, the primary phase of combat is likely to be short. There is no obvious limit, however, to the length of the secondary phase, and, combined with the ambiguity of the war aims of the dominant force, this leads to the troubling prospect of perpetual attrition.

Force disparity thus needs to be factored into assessments of war aims, both one’s own and those of an enemy. Setting unachievable or unrealistic goals makes victory in secondary phase conflict impossible. The inability to respond effectively in the secondary phase of conflict can either lead to perpetual conflict or to Goliath’s humiliation and defeat.

To avoid this quagmire, one must understand the nature and implications of force disparity in complex systems, and recognize the multivalent character of conflict scenarios in global culture.

It is ironic that the creation of force disparity renders more powerful weapons systems less important to the final outcome of warfare in the 21<sup>st</sup> Century than ever before. Instead, global peace and security depend on the successful

resolution of secondary phase conflict using ‘weapons’ not traditionally seen to be part of the spectrum of military operations. Given that the traditional ‘battlefield’ has been replaced by the much less distinct ‘battle space,’ we need to realize that the conditions for secondary phase conflict are established on both sides before the first shot is ever fired.

The ongoing decline of foreign aid as a percentage of Gross National Product among the western nations is therefore a much more dangerous indicator of global instability than an increase in military expenditures. Rather than spending more resources to widen the unbridgeable disparity between forces engaged in primary phase warfare, we should be using those resources to leverage system effects in areas where – should war break out – the secondary phase might prove to be the most dangerous in the long term. The realization that foreign aid serves security as well as humanitarian interests makes it possible to build a social coalition working toward a common end, even if for very different reasons.

Social justice issues have traditionally been associated with pacifist positions, and sidelined by the military objectives of taking or defending territory. In a global culture such as we now enjoy, however, whether people have food, shelter, education, employment, and a sense of personal security has necessarily become part of the war aims of the dominant culture, both at home and in whatever theatre a conflict breaks out.

Thus, in a world where the disparity between rich and poor countries continues to increase, the provision of genuine aid can become a means of reducing the possibilities of conflict before it occurs, and minimizing the leveraged effects of secondary phase conflict when it does occur. Social and economic issues are therefore critical elements of battle space operations before primary phase combat begins, and become even more critical during the secondary phase. The linkage between these issues and military operations already exists. What is needed is a unified doctrine that establishes the explicit intention to leverage positive social and economic effects by whatever means, military or otherwise, that are required.

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Such a statement, of course, can be construed as 21<sup>st</sup> Century imperialism – the same intention that accompanied European military, economic, and religious expansion in earlier times. When force disparity leads the dominant side into conflict for its own sake, or for the sake of its own citizens, this kind of criticism is merited. One would hope, however, that our developing global culture might eventually reflect the humanitarian concerns upon which the United Nations was founded, and that force disparity might instead be used to leverage justice, peace and hope.

## Force Disparity and the Future of the Canadian Forces Abroad

The existing force disparity between Western and other militaries suggests a possible niche for the Canadian Forces in its deployment to future conflict zones abroad, and a possible unified focus for Canadian defence and foreign policy in managing and resolving secondary phase conflict effectively:

1. The CF will never have the money, personnel or equipment to engage effectively in large-scale primary phase combat operations. We therefore should not even attempt such a structuring of the future CF for primary phase conflicts either on our own or in terms of interoperability with other militaries. We should make this decision part of a public linkage between Canadian defence and foreign policy that is intended to leverage the maximum humanitarian benefit in secondary phase conflict.
2. The CF should restructure its future operations, equipment procurement, and recruiting around task force units able to be deployed in secondary phase conflicts, in which the combat capability (ground, air and sea) is focused on force protection of CF deployments. By establishing such doctrine first, we therefore would have the grounds on which to decide what new technology is required and to lobby more effectively in both political and public spheres for the necessary resources.
3. The CF should commit itself to providing medical treatment, infrastructure development and peacekeeping support to enable affected populations to recover rapidly from the loss of existing community systems as a result of primary phase conflict, natural disaster, or civil war.

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4. The CF should therefore develop the capacity to mobilize rapidly and deploy and sustain task forces comprised, as required, of a field hospital, combat engineers, and a peacekeeping force. Having the CF independently capable of all aspects of deployment, supply and maintenance while in the field, including the protection of its deployed forces, would minimize interoperability issues.

5. There is a role for a small number of elite ‘high-tech’ troops to engage in domestic counter-terrorist operations or targeted strikes abroad. These troops would require the ability for immediate domestic deployment, rapid deployment overseas, and the ability to self-sustain short-term independent operations in the field.

Such an intentional focus on secondary phase conflict operations would not only gain support from a larger segment of the Canadian population, it would also guide defence expenditures in a specific direction at manageable and sustainable levels. Adopting such a policy for the CF abroad would also enable the identification and efficient delivery of directed aid from both government and non-governmental sources to affected populations.

A focus on secondary phase conflict operations could help resolve the existing dichotomy between peacemaking and peacekeeping in CF policy. It would also be in keeping with the role Canada has accepted for decades in support of United Nations initiatives for humanitarian intervention and the resolution of conflict around the world.

Asymmetry and its attendant ideas about high-technology warfare, however exciting or alarming, should not be used to guide Canadian defence policy into the 21<sup>st</sup> Century. A more realistic, pragmatic, and fiscally responsible approach for Canada emerges from the systems implications of force disparity.





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## FROM THE GREAT WAR TO THE NEXT WAR: TRANSFORMING THE CANADIAN INFANTEER

Today's warrior. Private Will Salikin, from the 3<sup>rd</sup> Battalion Princess Patricia's Canadian Light Infantry (3 PPCLI), provides security cover in Kandahar, Afghanistan.

by Captain Bill St. John, CD

**T**he infanteer has always been the basic element of the industrial age army. The combat performance expectations of the 21<sup>st</sup> Century battle space, however, require an elite infanteer that may never exist.

### 21<sup>st</sup> Century Warfare and the Future Soldier

**I**t is not a novel concept to proclaim that some new technology or technique will fundamentally change the way war is fought. There is a growing body of literature on the evolving nature of war and the impact of technology within it. Most Western armed forces, including Canada's, have some type of 'soldier of the future' program to which substantial time and resources are being devoted.<sup>1</sup>

In the face of these changes, however, the ultimate task of the infantry has changed very little. The infanteer still has to close with and destroy the enemy. Close combat relies on the basic skills of the infanteer and his ability to carry the required weaponry, ammunition and equipment into battle. This article will trace the evolution of the infanteer from the Great War to the Next War to demonstrate that the recruitment and training, the equipment and the combat expectations of the infanteer have reached a crossroads with respect to the combat requirements of the 21<sup>st</sup> Century battle space.

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A throwback to earlier times...A Canadian infantry company on the march during the First World War.

During the Second World War, potential recruits were divided into two categories. Category 'A', or fit for general service, was defined as: "Men perfectly fit, mentally and physically, for all active service conditions of actual warfare in any climate, who are able to march, can see to shoot, and hear well." This category was necessary for enlistment in any unit. Category 'B' was more specialized, and these men could be employed on the lines of communication or in the skilled trades. The age for recruitment ranged from 18 to 45. As was the case during the First World War, there were also specifications for height and chest size, and, similarly, these standards were relaxed as the war progressed and manning needs dictated. In addition, men had to be British subjects and "of good character."<sup>4</sup> One notable

difference from the First World War was the disqualification of educated men, RMC graduates, and other professionals from the enlisted ranks.

The official training regimen became longer and more complicated as new weapons were introduced into battle. The first stage of training was individual, during which the soldier was taught discipline and the handling of his own weapons and equipment. The second stage was collective, during which he learned how to work as part of a tactical manoeuvre team. Many new recruits were illiterate or semi-literate, and required elementary education in order to become useful soldiers.<sup>5</sup> Despite the fact that over 30 percent of the Canadian Army during the Second World War consisted of trained specialists and tradesmen, training was often casual, haphazard and geared to First World War methods of fighting.

If one fast-forwards to the Canadian Forces today, the average soldier is expected to have a minimum of a Grade Ten education and be "physically robust, mentally tough, dependable, self-disciplined and [be] able to react quickly and adapt readily to changing situations." The contemporary infanteer must undergo a 10-week Basic Military Qualification (recruit training) at St. Jean, Quebec, focusing on CF policies and regulations, dress, drill and deportment, first aid training,

## Recruitment and Training

Recruitment and training have generated significant advances over the years, yet the core infanteer remains fundamentally unchanged. In the First World War, Canada had a small population of just eight million, of which perhaps 1 ½ million were of fighting age. Canada would eventually raise over 650,000 men for the war effort, though recruiting standards were relaxed to meet quotas. Recruiters often ignored physical limitations such as height, age and disability. Recruiting standards, as reflected in the *Military Service Act* of 1917, based conscription on age, health, marital and financial status, and not on any particular skills or abilities.<sup>2</sup>

There was a wide variance in the standards of training. The need to send the troops to England as quickly as possible limited the time available for training at Camp Valcartier, the embarkation point. Lack of organization, medical testing, and kit and equipment problems further delayed the training. All the soldiers engaged in elementary drill, as well as rifle and bayonet exercises – during which the priority was on rifle training – and many men went through these courses several times before qualifying. Beyond this, there was little time for specialist training.<sup>3</sup>

Nuclear, Biological and Chemical (NBC) familiarization, weapons handling, and survival in field conditions. This is followed by a 10-week Soldier Qualification course, where the emphasis is placed upon physical fitness, dismounted offensive and defensive operations, reconnaissance patrolling, advanced weapons handling (including grenades, machine guns and anti-tank weapons), and field craft. Next comes a 10-week Basic Military Occupation Course with more of the same, but adding signalling, navigation, and section and platoon tactics training. In addition to all of this, there is instruction in constructing field defences, trenches and roadblocks, and the laying and mapping of minefields. Then, the infanteer is sent to a regiment for an initial operational tour before being allowed to pursue advanced training in the following specialties: communicator, reconnaissance patroller, anti-armour gunner, sniper, parachutist / parachutist instructor, NBC instructor, mountain warfare fighter, or urban operations fighter, to name but a few options.<sup>6</sup> So it is clear that from the First World War until the present day, we have seen a significant increase in the amount of training required to become an infanteer, but only a concomitant marginal increase in minimum recruiting requirements.

### Equipping the Infanteer

Turning to the infanteer's equipment, more gadgets have been added since the First World War, yet many essential elements remain the same. The First World War infanteer initially wore a version of the British M1902 uniform, and fully adopted it as the war progressed. It included a leather jerkin, which was very popular in cold weather. Our warrior also wore the British M1915 trench cap in cold weather, and carried a 2-pound Mark 1 steel helmet. In addition, he carried a mess tin, a thoroughly worthless MacAdam shield shovel, and various versions and combinations of valise equipment and Canadian pattern web equipment.<sup>7</sup> Weapons included the infamous Ross Rifle, portable machine guns, trench mortars, grenades and rifle-grenades. In due course, Canadian soldiers began wearing gas masks. Initial, extemporaneous protection consisted of applying *ad hoc* masking pads soaked in urine, which largely neutralized the chlorine. Some soldiers preferred using handkerchiefs dampened with a solution of bicarbonate of soda, although, relatively soon, more efficient gas masks were produced and distributed. Communications were still very primitive, were not mobile, and relied on landlines. Although there were some attempts to use radios, they were not very portable and their impact was limited.

Canadian Second World War infanteers wore standard battle dress of khaki wool serge, and steel helmets with camouflage that were more circular with a flatter brim than their First World War counterparts. An infanteer also carried his entrenching tools, ammunition, water bottle, mess tin, toiletries, ground sheet, gas cape (essentially a waterproof poncho

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supposed to protect against blistering agents), box respirator (gas mask), compass, and other items in pouches or packs attached to his web equipment. Essentially an interconnected harness system of belts and braces worn across the shoulders and fastened at the waist, the 1937 design pattern web equipment was waterproofed and dyed to a khaki colour. All this equipment served to weigh our man down even more than his First World War counterpart.<sup>8</sup> The Lee-Enfield rifle and Bren light machine gun were the basic infantry weapons carried by Canadian soldiers in this war. Additionally, there was now a dedicated soldier in each platoon who was required to carry, use and maintain a portable radio.

If one fast-forwards again to the Canadian Forces of today, the infanteer is armed with the C7 rifle, which replaced the heavier, sturdier Fabrique Nationale (FN) C1 in the early 1990s. This weapon is augmented by a variety of heavy, medium and light machine guns, and also by mortars and grenades. Advances in technology have increased the effectiveness of anti-tank guns, and have added unguided rockets, and short and long-range guided missiles to the infanteer's arsenal. Radio technology has improved to allow smaller, more portable communication equipment, with which every soldier must be familiar. Improved environmental clothing and equipment permit operations in various climates. Lightweight vests and helmets provide better protection from fragmentation weapons, and biological and chemical suits provide a soldier with better odds of survival in an NBC environment. Currently, the new Tactical Vest (TV) is replacing the 1982 Pattern web gear throughout the Canadian Army. This is designed to carry everything the infanteer needs to fight and survive on the battlefield, with special pouches to accommodate such items as Mag-Lite flashlights, smoke grenades, maps, rations, rifle and machine gun ammunition, fragmentation grenades, and a bayonet.<sup>9</sup> Even rations are designed to be as lightweight as possible, while (theoretically) providing the best possible flavour and nutrition. It is evident that the equipment of the infanteer has become substantially more complex as time has progressed.

### Combat Expectations of the Infanteer

The advent of artillery, tanks, radio communications and armoured transport in the early 20<sup>th</sup> Century diversified the combat environment, but did not fundamentally alter the combat expectations of the baseline infanteer. If one studies combat expectations during the First World War, the only skill required of the average soldier was the courage to leave the trench on command and in the right direction to engage the enemy in close order combat. This expectation remained much the same throughout the war, despite new technologies and tactics that were introduced, particularly during the last year, which produced more fluid and dynamic battle scenarios. Technological innovations fielded during the war included long-range, rapid firing rifles, heavy machine guns, and barbed wire,

which made defensive positions almost impregnable until the fielding of the tank later in the war. The infanteer also had to learn to survive in an environment of trench warfare, under gas attacks, and while advancing under a rolling artillery barrage. Technology of the times had its limits: communications were still primitive; radios were not yet useful; aircraft were often ineffective for many reasons; runners had a high mortality rate; and flares and light flashes rarely achieved their intended purpose. Although all these technological innovations required some small degrees of specialization of infantry, the average infanteer was still expected to fight in primitive terms and was still cynically viewed as ‘cannon fodder.’

During the Second World War, the basic combat expectation of the infanteer was not significantly different. He was still expected to close with and destroy the enemy. Technological progress during the war, however, demonstrated the growing importance of well-trained infantry. Despite the importance of tanks and aircraft, only the foot soldier was versatile enough to fight in all weather conditions, and on all types of terrain, from urban street fighting to winter, desert, jungle, mountain, or amphibious warfare conditions. The infantry used fire and movement tactics to manoeuvre – that is, one sub-unit would fire to cover the advance of another. By these methods, the attackers would close on their objective, where close-quarter fighting would then take place.<sup>10</sup>

By the beginning of the Bosnian conflict, and until today, the combat expectations of the CF infanteer have still not fundamentally changed. An infantry soldier’s role remains, “to engage, close with and destroy the enemy, by day or by night, in all types of terrain and weather.”<sup>11</sup> According to modern CF recruiting, he or she must possess courage and common sense, and must be both able and willing to learn the wide range of specialized skills and techniques made necessary by the diverse nature of infantry operations. Personal integrity and leadership ability are vital, as is the ability to work well as part of a team.<sup>12</sup> However, the scope of training, and the complexity of skills required, have increased to the point where a significant amount of time and resources need to be expended on training and equipping our specialized infanteer in various roles, such as mountain operations or urban warfare. Thus far, it is evident that the demands upon the infanteer have increased significantly since the First World War, and this trend will likely continue. The need for lighter, more mobile forces, which can be rapidly deployed, will require specialized infantry and small unit tactics.

Future soldier equipment programs, and those currently in place, are intended to make the soldier more comfortable in the field. New helmets, the current Canadian Disruptive Pattern (CADPAT) camouflage uniform, experimental uniform design with ballistic protection, and other ‘nanotechnology’ programs may make the soldier both safer and less burdened. However, it is the type and quantity



Private James Cawley, a member of B company, Task Force Kabul, aims his C-9 Light Machine Gun during a foot patrol practice.

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of new equipment that the future soldier must carry that may be more problematic. There are trials currently being conducted that include personal computing devices, personal role radios (PRRs) for intra-section communications,

expected of the average, individual infanteer with respect to combat expectations, training, and required skill sets. The ever-increasing emphasis upon specialization, and the requirement for small unit tactics and self-reliance, will demand such sophisticated expertise and training that many infanteers may well be overwhelmed. The bar for recruiting, educating, and training infanteers will need to be raised if the CF is to attract the individuals capable of this kind of specialized performance in the future battle space.

target detection engagement devices and navigational aids, ‘mini computers’ with ‘pop-up’ screens for tracking navigational routes, and hardware that allows the soldier to see where his or her section and platoon members are actually located within the battle space.<sup>13</sup> These advances are all in addition to other equipment, that includes night vision goggles, laser aiming systems, and thermal binoculars and weapons sights. Additionally, the infanteer will be required to operate with weapons in nuclear, biological and chemical environments in full NBC gear, and must be able to self-administer antidotes in response to NBC attacks. The future infanteer might also carry a multi-weapon platform, capable of firing versatile, intelligent munitions.<sup>14</sup> Hence, an infanteer will become a combat system linked within a combat battle space. Future soldiers, instead of being less burdened by personal equipment, without proper integration may actually become more burdened with the various proposed ‘widgets’ of the future. Soldiers will probably spend an inordinate amount of time training to maintain and use these various gadgets, hopefully not at the expense of some fundamental close order fighting skills.

Today, many Canadian military thinkers subscribe to the Revolution in Military Affairs (RMA), characterized by computerization, precision munitions, and standoff warfare. These elements of technology also have a profound impact on the capabilities of the individual foot soldier. It is impractical to recruit masses of soldiers from civilian society and attempt to mobilize them quickly. Combat expectations of the future soldier will incorporate multi-tasking to a degree never before experienced, and only the most highly skilled and versatile soldier will be able to function effectively in the future battle space.

The basic maxim of the infanteer – “to close with and engage the enemy” – will likely never change. History has consistently shown that warfare has a basic requirement for soldiers to fight and occupy ground. While this prerequisite will continue, the combat requirements of the future battle space must be reflected in the recruitment, training and expectations of the Canadian infanteer since 21<sup>st</sup> Century warfare will require a soldier so specialized and highly trained that he may be unrecognizable to his predecessors in battle.

Ranging from the relatively unskilled soldiers of the Great War, to the increasingly specialized soldiers of today, we may have reached the limit for what can be reasonably

**“The basic maxim of the infanteer – ‘to close with and engage the enemy’ – will likely never change.”**



**NOTES**

1. Ted McKenna, “Dressed for Success”, in *The Journal of Electronic Defense*, February 2005, pp. 31-35.
2. Desmond Morton, *A Military History of Canada*, (Edmonton: Hurtig Publishers, 1990), pp. 135-137. Additionally, factory owners demanded that some skilled workers be exempted from military service and farmers pleaded for harvest leave so soldiers could help in the fields.
3. Colonel G.W.L. Nicholson, *Official History of the Canadian Army in the First World War: Canadian Expeditionary Force 1914-1919*, (Ottawa: Queen’s Printer, 1962), p. 24.
4. Colonel C.P. Stacey, *Official History of the Canadian Army in the Second World War: Volume 1, Six Years of War: the Army in Canada, Britain and the Pacific*, (Ottawa: Queen’s Printer, 1955), p. 113.
5. *Ibid.*, p. 137.
6. <<http://www.recruiting.forces.gc.ca/engraph/army/jobs.e.aspx>>, accessed 28 March 2005.
7. <<http://www.rootsweb.com/~canmil/ww1/army/equip.htm>>, accessed 25 March 2005.
8. <<http://www.junobeach.org/e/4/can-tac-inf-kit-e.htm>>, accessed 30 March 2005.
9. <<http://www.calgaryhighlanders.com/transitions2005.htm>>, accessed 25 March 2005.
10. <<http://www.junobeach.org/e/4/can-tac-inf-tac-e.htm>>, accessed 30 March 2005.
11. <<http://www.lssr.ca/infantry.htm>>, accessed 25 March 2005.
12. <<http://www.recruiting.forces.gc.ca/engraph/army/jobs.e.aspx>>, accessed 28 March 2005.
13. <[http://www.forces.gc.ca/site/Feature\\_Story/2004/mag04/26-2\\_f\\_e.asp](http://www.forces.gc.ca/site/Feature_Story/2004/mag04/26-2_f_e.asp)>, accessed 28 March 2005.
14. Capt Eric Dion, “The E-fantry Warrior! The Evolution of the Queen of Battles in the Face of the 21<sup>st</sup> Century Challenges,” in *The Canadian Army Journal*, Vol. 7 No. 2, Summer 2004.