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

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

by Captain Bill St. John, CD

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

21st Century Warfare and the Future Soldier

It 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.[1]

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 21st Century battle space.

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

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.[2]

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.[3]

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."[4] 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.[5] 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,

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.[6] 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.[7] 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 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, the1937 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.[8] 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.[9] 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 20th 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,

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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.[10]

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."[11] 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.[12] 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

DND photo IS2004-1230a Combat Camera

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

"It is evident that the equipment of the infanteer has become substantially more complex as time has progressed."

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, 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.[13] 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.[14] 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.

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 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.

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 21st Century warfare will require a soldier so specialized and highly trained that he may be unrecognizable to his predecessors in battle.

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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>, accessed 28 March 2005.
14. Capt Eric Dion, "The E-fantry Warrior! The Evolution of the Queen of Battles in the Face of the 21st Century Challenges," in *The Canadian Army Journal,* Vol. 7 No. 2, Summer 2004.