Canadian
Forces
College

Collège
des
Forces
Canadiennes

CAVALRY: AN OPTIMIZED CAPABILITY FOR ADO

Maj R.M.R. Morin

JCSP 41

Exercise *Solo Flight*

Disclaimer

PCEMI 41

Exercice *Solo Flight*

Avertissement

Canada

CAVALRY: AN OPTIMIZED CAPABILITY FOR ADO

Maj R.M.R. Morin

"Cavalry's ability to shape the battlefield and ensure freedom of maneuver for friendly forces is undermined"
- Robert S. Cameron

INTRODUCTION

Based on the recent conflict in Afghanistan, a generation of Canadian Armed Forces (CAF) leadership and soldiers has developed a skewed view and comprehension of the employment of armour. Armour capability is now misunderstood. Total understanding of the capabilities of armour is required by Operational Commanders and staff in order to optimize capability. Great lengths have gone into the study of military capabilities, the correct and timely employment of which creates conditions for success at all levels of command. By examining employment of The Royal Canadian Armour Corps (RCAC) and other allied forces, and analyzing armour capabilities within the context of Adaptive Dispersed Operations (ADO), it is possible to identify potential areas that, if addressed would see armour assets optimized. The resultant understanding will increase CA operational capability.

This paper will argue that perceiving CA "armour – reconnaissance" assets, as a subset of "armour", causes misemployment, underutilization, and decreases optimization of capability. By adopting the *cavalry* employment concept, spirit and terminology, CA Operational Commanders will better understand RCAC capabilities and be in a position to optimize performance and effects at the operational and tactical level. This proposed change would improve upon the concept of employment of armour: to being a key manoeuvre element within ADO and not relegated to provide enabling capacity to support the manoeuvre of infantry.

This research paper will reinforce the employment of cavalry. It will highlight what CA cavalry can do, and contrast this to our allies. There is no intent to increase CA resources in order to achieve the end state, simply to enhance operational capability with current resources. The terms *armour*, *armour–tank* and *armour-reconnaissance* describe current doctrinal armour roles. Armour has generally been categorized as a heavy, medium and light capacity. For this paper, heavy-armour will be characterized by main battle tanks (MBTs), medium armour will be characterized by Coyote or LAV III platforms, and light armour will be characterized as a LUVW or HUMV based platform. I use the term *cavalry* to describe an enhanced and optimized doctrinal function that embodies the traditional cavalry spirit and is seen as a more robust and aggressive maneuver element.

As Canada and its allies review their forces for ADO, much has been published regarding what the future holds for land warfare. Some of these reviews have led to a decrease in various capabilities with enhancements to others. "Political psychologists have shown that the terms we use to describe issues can influence the way we evaluate options and frame potential solutions."[1] By reviewing present armour capabilities, the associated terminology and recent lessons learned it can be determined that the capabilities of the RCAC have not been exploited as well as they could be. This paper will focus on three areas of discussion to illustrate cavalry capabilities so that Operational Commanders completely understand the resources at their disposal as they prepare for ADO. Within the first section, a comparative analysis of cavalry amongst allies and an examination of narratives pertaining to terminology and the resulting misperceptions of

---

[1] W. Vacca, and M. Davidson. *The Regularity of Irregular Warfare*. (Parameters, 2011), 23. http://strategicstudiesinstitute.army.mil/pubs/parameters/Articles/2011spring/Vacca-Davidson.pdf

armour capability will support the requirement for change. Second, the doctrinal role of cavalry within ADO will be analysed to evaluate compliance with present doctrine. Thirdly, an examination of cavalry capabilities against hybrid threats will illustrate the suitability of cavalry in the Future Security Environment (FSE). In the end, it will be clear that an opportunity exists to enhance the RCAC capability by adopting the cavalry employment concept and terminology. This change will enable Operational Commanders and staff to better understand this capability.

"In this day and age, long distance reconnaissance must be organized to fight in execution of its mission, to fight for time to send information, and to fight for time for the main body to properly utilize the information sent in…Reconnaissance capable of only observation is not worth the road space it takes."

- US Major General C. Scott, 1942

THE ARGUMENT FOR CHANGE

This section will outline why there is a need to change. First it will examine how the CA has employed armour the last twenty-five years. Second it will analyze our allies and observe how they utilize their resources. This section will show that given the underemployment of armour within the CA that there is a need to rejuvenate this capability and provides three considerations that would see the traditional spirit of cavalry embraced.

Armour Employment

The last twenty-five years have seen primarily three employments to which the RCAC has deployed: Somalia, the Balkans and Afghanistan. The primary mission of the medium – armour RCAC units deployed to Somalia was to provide security to the ongoing humanitarian relief and arms control.[2] The same capability was deployed to the Balkans, to include MBTs. Forces in the Balkans initially focused on Pease Support Operations (PSO), through enforcing demilitarization areas and then supporting humanitarian relief.[3] Although successful in accomplishing tasks, the employment of armour during these conflicts was different from the tasks it was expected to perform during the Cold War era, which would have been the more traditional offensive and defensive tasks.

The CA has been disadvantaged by the past decade of warfighting in Afghanistan, as is relates to the comprehension of armour. This conflict was Counter Insurgency (COIN) focused. Although Operational Commanders utilized heavy and medium – armour assets to accomplish tasks, the method of employment was not optimized. Failure to fully comprehend armour capability by today's CA personnel creates conditions that will see armour underemployed and its capabilities marginalized. This fact was captured by the RCAC Lessons Learned in Afghanistan.[4] Experiences of the last 13 years have not optimized the full capability of armour. This has led to a generation of personnel that are

---

[2] The Royal Canadian Dragoons. *Regimental Catechism*. (June 1998), 39.
[3] Department of Public Information, United Nations. Last accessed 4 May 2015, http://www.un.org/en/peacekeeping/missions/past/unprofor.htm
[4] The Royal Canadian Armour Corps in Afghanistan. *Lessons Learned - Dispatches DRAFT (2015),* 10.

unaware of the true fundamentals of armour. Integral to the RCAC, Afghanistan training was orientated toward COIN operations. This necessity diminished "basic and conventional Armoured skill and competency."[5] The risk is that as an institution, members of the CA are carrying on in their duties in the CA and the joint environment, with an inaccurate view of armour. This is of greater importance given how the CA has re-orientated training to a conventional warfare focus, an area where experience is limited.

What has been shown thus far is how armour has been utilized the past twenty-five years. Although successfully accomplishing missions, based on the three conflicts, the full capability of armour has not been exploited and a lack of understanding and employment exists. This situation is not isolated to the CA. Author Robert Cameron commented that United States Army BCT commanders and staff did not consider their reconnaissance elements for screen, cover or guard tasks.[6] Change is required to correct this shortcoming.

Allied Cavalry

Curtis D. Taylor observed, "Lessons from OIF strongly suggest that effective reconnaissance will continue to require meeting the enemy on the ground and fighting for information."[7] As armour – reconnaissance resides within the RCAC, it is important to

---

[5] *Ibid*, 16.

[6] Robert S. Cameron. *Losing Our Way: The Disassociation of Reconnaissance and Security Organizations from Screen, Guard, and Cover Missions*. (Military Review, 2014), 33.

[7] Curtis D. Taylor, "Trading the Saber for Stealth: Can Surveillance Technology Replace Traditional Aggressive Reconnaissance?" The Land Warfare Papers, The Institute of Land Warfare, (Arlington Virginia, September 2005), 3.

consider this observation from OIF. When comparing the RCAC to our allies it is readily apparent that the CA lacks a *cavalry* component, both in employment and terminology. This section will look at our allies and their adoption of cavalry terminology and employment of armour. Australia, the United Kingdom (UK), France, and the United States of America (USA) will be examined. It will be clear our allies have adopted cavalry, both as a capacity and as a governing terminology.

The role of the Royal Australian Armoured Corps (RAAC) is to locate, identify, destroy or capture the enemy, by day or night, in combination with other arms, using fire and manoeuvre.[8] The RAAC consists of Tank Regiments, Cavalry Regiments and Light Cavalry Regiments. The Armour Regiments equate to the armour classification of heavy - armour given these are MBTs. The Armour Cavalry Regiments (ACRs) equate to medium - armour and the Light Cavalry equates to light armour. The cavalry role is: to locate, dislocate, and disrupt the enemy through the conduct of offensive, defensive and security actions."[9] Reconnaissance is one of the tasks performed by Cavalry Regiments. The RAAC has adopted both cavalry spirit and terminology, and not classified its manoeuvre elements as armour − reconnaissance.

Within the UK, the Army Armour capabilities are comprised of Armour Regiments, Armour Cavalry Regiments (ACRs), and Light Cavalry.[10] The Armour Regiments consist of MBTs and equate to heavy - armour. The ACRs equate to medium - armour and the Light Cavalry equates to light - armour. In 2014, the UK announced the procurement of the SCOUT SV for the Armour Cavalry. The UK Chief of General Staff

---

[8] Royal Australian Army. Last accessed 2 May 2015, http://www.army.gov.au/Who-we-are/Corps/Royal-Australian-Armoured-Corps
[9] Ibid
[10] UK Ministry of Defence. Last accessed 2 May 2015, http://www.army.mod.uk/armoured/25398.aspx

(CGS) state, "The SCOUT family…will refresh our armoured capability and ensure the army remains a first-tier manoeuvre force."[11] In January 2015, during the UK Army conference, the CGS stressed the need to fight and operate smarter. His desire was to "Exploit the mechanized and cavalry opportunity."[12] It is clear that the UK has adopted cavalry terminology and see this capability as a manoeuvre element.

In France, cavalry is resident within the Army, as emphasised by its "Ecole de cavalerie."[13] Its capabilities consist of heavy - armour, medium - armour and light armour on a variety of platforms. During the conflict in Mali, the first French elements committed to this conflict were the cavalry. These were key to the French success given the tempo capability afforded by this element, and given the usage of the "full scope of their capabilities: protection, firepower, mobility, reversibility, fighting for intelligence and moving throughout wide areas."[14] The French Army has adopted cavalry terminology and optimizes the function provided by cavalry in theatres of conflict.

The United States (US) Army armour capability encompasses a wider range of capabilities, to include: armour – tank, cavalry (heavy, medium and light) and reconnaissance specific platforms. Even with its arsenal of tank, cavalry and reconnaissance assets, Professor Robert Cameron, of the US Army Combined Arms Center observed in the recent war in Iraq that "Many reconnaissance units found themselves employed as maneuver units with a broad range of activities beyond

---

[11] ArmyTechnology. http://www.army-technology.com/news/newsgd-receives-35bn-order-from-uk-mod-for-scout-sv-platforms-4360744 September 2014.

[12] Army Command Information Netwok. 04/15, 15 January 2015, 2.

[13] Defence - Government of France. http://www.defense.gouv.fr/terre/formation-entrainement/formation/specialisee/ecole-de-cavalerie

[14] MG Arnaud Sainte-Claire Deville. US Army. E-Armor. (Oct – Dec) 2014. Last accessed 4 May 2015, http://www.benning.army.mil/armor/eARMOR/content/issues/2014/OCT_DEC/Sainte-Claire.html

information collection."[15] FM 17-95 *Cavalry Operations* states, "Cavalry serves as a catalyst that transforms the concepts of maneuver warfare into a battlefield capability."[16]Additionally, FM 17-95-10 *Regimental Armored Cavalry*, identifies Reconnaissance, Security, Offense and Defence, and all the applicable sub-missions, as the mission profiles for cavalry. Even with its extensive capacity, the US Army uses its reconnaissance assets in the cavalry role as a manoeuvre element.

Considerations for Change

The nature of recent RCAC missions has caused an atrophy of employment of CA armour. In order to rejuvenate and optimize capability, three areas for consideration will be discussed in this section: training, education and terminology. First, to correct this shortcoming within the RCAC involves training in conventional warfare, which is being facilitated by the RCAC School, and at tactical levels. Full RCAC capability must continue to be emphasised on the Army Operations Course. Secondly, the CA needs to continue to educate Operational Commanders on the full capabilities of the RCAC. The conduit for this task is first the role of Director of Armour and secondly the role of all the stewards of the cavalry profession. Similarly, RCAC capability must be understood by officers attending the Joint Command and Staff Course. Thirdly, the narrative battle pertaining to terminology should be addressed. As philosopher Ludwig Wittgenstein

---

[15] Robert S Cameron. "To Fight or Not to Fight," Combat Studies Institute Press, US Army Combined Arms Center, Fort Leavenworth, Kansas. 485. Last accessed 21 April 2015, http://usacac.army.mil/cac2/cgsc/carl/download/csipubs/cameron_fight.pdf
[16] Headquarters, Department of the Army. *FM 17-95 Cavalry Operations,* (Washington, DC, 1996), 1-2.

commented, "The limits of my language mean the limits of my world."[17]   Lessons

learned from Afghanistan identified armour – reconnaissance capabilities were not

consistently exploited,[18] thus a better term is required. This term is *cavalry*. Cavalry is

defined as the mounted manoeuvre capability that can move, shoot and communicate, to

include the spirit of an aggressive maneuver element capable of operating across vast

distances for extended durations. Applying naming conventions that better describe

armour will benefit Operational Commanders. The adoption by the CA to utilize cavalry

in place of armour would provide a more thorough understanding of the employment of

this function and contribute to optimizing this capability.

This section presented the argument for change and considerations to correct

identified misperceptions of armour. It illustrated the employment of armour the last

quarter century and how its capabilities were not always optimized. It analyzed our allies

and observed how they utilize their cavalry. Three considerations were presented that

would enhance capability: training, education and the doctrinal narrative. General Gray,

29th Commandant USMC, stated,

> Like war itself, our approach to
> warfighting must evolve. If we
> cease to refine, expand, and improve
> our profession, we risk at being
> outdated, stagnant, and defeated.[19]

Our allies use cavalry as an aggressive and spirited manoeuvre capability. The CA has

not embraced cavalry doctrinally. It is this author's argument that the CA should change,

---

[17] Ludwig Wittgenstein, *Tractatus Logico-Philosophicus*, (Keagan Paul: London, 1922), 356. Last accessed 21 April 2015, http://people.umass.edu/phil335-klement-2/tlp/tlp-ebook.pdf
    [18] The Royal Canadian Armour Corps in Afghanistan. *Lessons Learned - Dispatches DRAFT (2015),* 10.
    [19] USMC, 36th Commandant's Planning Guidance, 2015, 2. Last accessed 8 May 2015, http://www.hqmc.marines.mil/Portals/142/Docs/2015CPG_Color.pdf

based on the supporting evidence of lessons learned that the capability is not optimized and after having determined how our allies operate. Adopting cavalry mindset and terminology, like our allies, would contribute to correcting any misperception of capability and improve operational effectiveness.

>
> **"*Knowledge must become capability*."**
> - Clausewitz, *On War*

CAVALRY IN ADO

If one accepts the argument for change and the cavalry narrative, it will be clear that cavalry is compliant within present doctrine. In accordance with *Land Force 2021: Adaptive Dispersed Operations*, the RCAC will continue to provide mounted manoeuvre warfare capability into the future. In order to maximize this capability at the operational level, it is necessary that CA personnel have a complete understanding of cavalry capabilities. Cavalry will henceforth be subdivided into three categories: heavy, medium and light cavalry. This section will first examine the feasibility of cavalry within ADO. It will then examine cavalry as a manoeuvre element and illustrate its unique capabilities.

Cavalry Feasibility

Cavalry provides a capability which is highly feasible to deliver effects sought within ADO. ADO is defined as,

> A force employment concept for the Army
> of Tomorrow that envisages employing

> highly adaptive land forces dispersed in
> time, space and purpose.[20]

The CA desire effects that heighten standing in the international community, and are

combat effective: meaning "highly mobile, adaptive, networked, sustainable."[21] Cavalry

capability satisfies these desired effects within ADO.

Throughout past conflicts such as World War II, the Balkans, Afghanistan and

Iraq, cavalry capability was a constant on the international stage. Heavy – armour

through light cavalry elements were consistently employed into these theatres. With the

success of cavalry in the past and in recent conflicts, cavalry will remain a dominant

maneuver element and its capabilities need to be optimized.

Cavalry maximizes combat effectiveness. Cavalry provides flexibility and options

to Commanders. In present doctrine, armour represents:

> A very cost-effective solution to a
> BG CO's requirements because of
> the tanks' multiple capacities, such
> as explosive breaching and
> protection in urban environment, and
> inherent flexibility when considering
> the alternate capabilities and systems
> that must be deployed to take their
> place.[22]

This situation does not change when adopting the cavalry narrative. The ability to rapidly

re-group, to aggregated and de-aggregated depending on tasks, is a requirement in

accordance with the ADO Force Employment Concept.[23] Cavalry is networked enabled.

---

[20] Land Operations 2021 – ADO: A Force Employment Concept for Canada's Army of Tomorrow.

[21] B-GL-310-001/AG-001, Land Operations 2021: The Force Employment Concept for Canada's Army of Tomorrow, 4.

[22] Department of National Defence, B-GL-321-005/FP-001, Battle Group in Operations (Ottawa: DND Canada, 2012).

[23] The Royal Canadian Armour Corps in Afghanistan. *Lessons Learned - Dispatches DRAFT* (2015), 8.

It possesses and abundance of sensors, vehicles, mobile or static command and control (C2) nodes, weapons and integral intelligence. The sustainment capabilities integral to cavalry satisfies the effects sought in ADO. Cavalry is adaptive given its three sub-components of heavy, medium and light. It has the ability to be dispersed across vast distances and with multiple purposes. With such characteristics, combat effectiveness is optimized.

Cavalry possesses the capabilities to successfully be employed in ADO. As its record in Afghanistan shows, units "consistently conduct dispersed operations over long distances and across the range of doctrinal reconnaissance tasks."[24] Recent training opportunities between CA cavalry elements and the US Army 10th Mountain Division this past year continue to prove its ability to be employed successfully within a multinational context. Cavalry provides the combat effectiveness sought within ADO.

Cavalry as a Maneuver Element

T.E. Lawrence recognized mobility as the ultimate character of war.[25] Cavalry is the key contributor within the battle space, and Operational Commanders need to understand the capabilities of this maneuver element. CA doctrine focuses on the "manoeuvre approach to operations in which shattering the enemy's overall cohesion and will to fight is paramount, and is achieved by targeting his centre of gravity."[26] Manoeuvre warfare is defined as, "An approach to operations in which shattering the

---

[24] Ibid, 4.
[25] James Schneider. "TE Lawrence and the Mind of an Insurgent," (Army Journal July 2005). 34.
[26] B-GL-310-001/AG-001, Land Operations 2021: The Force Employment Concept for Canada's Army of Tomorrow, 10.

enemy's overall cohesion and will to fight is paramount."[27] Manoeuvre warfare principles to find, fix and strike contributed to the fundamentals of dispersed operations. This section will examine cavalry as a manoeuvre element through two lenses: its individual role and as it relates to the Battle Group (BG).

Key roles of this manoeuvre element will be examined. The present doctrinal role of armour is to "Defeat the enemy through the aggressive use of firepower and battlefield mobility."[28] The RCAC currently possesses two primary capabilities to produce this effect: armour – tank and armour – reconnaissance. *Land Operations* articulates the need for the CA to be agile, multipurpose, net-enabled, and capable of lethal and non-lethal effects and full spectrum capable.[29] MBTs provide direct fire and battle field mobility to defeat the enemy, and protection to other friendly forces. MBT history and effectiveness since the Second World War is well documented and know. This author argues the tank role and capabilities are relatively more well-known and understood by present CA leadership and Operational Commanders. MBT capability is understood and effective in ADO. As authors Johnson, Markel and Shannon observed of their studies of Iraq, heavy forces, tanks, are "key elements of maneuver in complex terrain; they are survivable, lethal and precise."[30] Clearly, armour – tank is a requirement in today's theatres and its role and capabilities are well understood.

As mentioned earlier, armour - reconnaissance is not as well understood within the CA. Doctrinally, armour – reconnaissance:

---

[27] B-GL-300-001/FP-001 Land Operations (Kingston: DAD, 2008), 5.
[28] The Royal Canadian Armoured Corps Information Paper – A Corps Advancing with Purpose, Draft (October 2013).
[29] B-GL-300-001/FP-001, Land Operations (Kingston: DAD, 2008), 18.
[30] D. Johnson, M. Markel, B Shannon. *The 2008 Battle of Sadr City*, RAND Corporation, 2011, 18.

> Uses superior mobility and aggressive action to obtain timely and accurate information to the Commander which leads to the defeat of an adversary."[31]

This definition is too limiting and is not as reflective of the full spectrum of capabilities that are provided by cavalry. Lessons learned from Afghanistan reinforce the lack of clarity of armour – reconnaissance, stating elements "were generally under-employed in conventional, doctrinal roles." It is this author's opinion that tactical security tasks are not fully exploited. Tactical security tasks are:

> The measures necessary to deny information to the enemy and to ensure that a force retains its freedom of action and is warned or protected against an unexpected encounter with the enemy or an attack. Armour – Reconnaissance contributes to tactical security through the execution of the following tasks: screen, guard, flank security.[32]

There is room to optimize RCAC employment in this area, as agreed to by Robert Cameron who stated "security missions have experience a doctrinal de-emphasis."[33] As previously mentioned, cavalry would contribute in correcting this inadequacy and provide capability sought in ADO.

Current doctrine at the BG level emphasises the importance of armour. The BG will be the Army's primary land combat element, within a joint formation context.[34] The

---

[31] The Royal Canadian Armoured Corps Information Paper – A Corps Advancing with Purpose, Draft (October 2013), 2.

[32] B-GL-321-005/FP-001, Battle Group Operations, 3A3-4.

[33] Robert S. Cameron. Losing Our Way: The Disassociation of Reconnaissance and Security Organizations from Screen, Guard, and Cover Missions. (Military Review, 2014), 29.

[34] Department of National Defence. *Designing Canada's Army of Tomorrow*, (Kingston 2011), 44.

three doctrinal manoeuvre elements within the BG are: Armour - tank, armour - reconnaissance and the infantry. In *Designing Canada's Army of Tomorrow*, it states "formations and battle groups will operate in both rural and urban environments, often simultaneously, and in virtually all types of terrain."[35] *Battle Group in Operations* states armour-reconnaissance:

> Is the only manoeuvre subunit in the
> Army that includes a robust C2
> element that is able to direct
> operations in a complex environment
> independent of camp infrastructure
> for prolonged periods of time.[36]

It is clear that with two of the three maneuver elements, that armour is the dominant manoeuvre capability that possesses unparalleled C2, and therefore it is of even greater importance that its capabilities are optimized.

Armour is emphasised as a maneuver element in present BG doctrine and is feasible for ADO. As observed by lessons learned, referring to a manoeuvre element as "armour – reconnaissance" is hindering employment. The CA is not the only organization reviewing its identity problem, as Thomas Spolizino remarked of the US Army, "We can agree that there is an identity problem within the Branch, that the current definitions are inadequate."[37] Referring to maneuver elements as cavalry maintains the intent of BG doctrine however affords a more spirited concept of employment capable of tactical security tasks and would subsequently correct under-employment of this capability.

---

[35] Ibid, 18

[36] B-GL-321-005/FP-001, Battle Group in Operations, 2012, 3A3-1.

[37] Thomas Spolizino, "Not Just Infantry with Tanks: Who We Should Be And Why The Army Needs Us To Be It," Last accessed 21 April 2015, http://www.benning.army.mil/armor/earmor/content/issues/2014/JUL_SEP/Spolizino.html

By adopting the ADO concept, the CA is posturing for full spectrum engagements within a complex environment along a non-contiguous dispersed operational framework.[38] Cavalry is compliant within present doctrine and capable of conducting tactical security tasks as a maneuver element at the BG level in ADO. What has been examined in this section has been feasibility of cavalry within the ADO and the present doctrinal application as a manoeuvre element. Regardless of the terminology used, cavalry or armour, it can be agreed there is a requirement for this capability in ADO given the combat effectiveness in provides. It can be agreed that cavalry satisfies the requirements of a capability within ADO. It is a fact cavalry is the key maneuver contributor in the battle space, but its capabilities could be further optimized. As a manoeuvre element, pertaining to heavy - armour, its capabilities are fully appreciated. This is not the case regarding armour – reconnaissance, but it could be given the previously detailed considerations. Institutionalized misperceptions of armour – reconnaissance in the CA must be corrected. As two of the three manoeuvre elements found in the BG and with the BG being the CA's primary land combat element, it is important to minimize deficiencies and optimize capability. At this time and regardless of the terminology used, the capability of the RCAC has been proven to be valid for ADO. Optimization within the CA will occur when doctrine is rejuvenated with cavalry concepts and terminology.

"Future work, specifically the Future Land Operating Concept describes the importance of a projectable war-fighting capability on land as an important source of hard power which serves as a deterrent to potential opponents."
- Armour Cavalry Concept of Employment, UK Ministry of Defence

---

[38] B-GL-300-001/FP-001 Land Operations (Kingston: DAD, 2008), 16.

HYBRID WARFARE IN THE FSE

The CA is preparing to employ highly adaptive land forces dispersed in time, space and purpose. The CA's orientation towards irregular warfare (IW) during the last decade and recently re-focusing on conventional warfare (CW) is a debatable topic: as it aligns effort and limited resources. Hybrid warfare is defined as warfare that encompasses both IW and CW. This section will look at the past, present and future of cavalry in the Future Security Environment (FSE) facing hybrid threats. This section will first evaluate the effectiveness of cavalry in CW and IW. Second, it will analyse the validity of cavalry in the FSE. It will become apparent that Cavalry is an optimal capability, as cavalry will be proven suitable for hybrid threats and be an appropriate capability required for FSE.

Hybrid Threats

Cavalry is an effective capability in both CW and IW. Effectiveness is defined as deriving "maximum combat power from the resources physically and politically available."[39] Attaining maximum combat power enables Operation Commanders to win on the battlefield and be successful in assigned campaigns. Author Kenneth Payne defines CW as:

> Is a society's way of fighting that
> encompasses the doctrinal thinking,
> the organisational structures, the
> rules of engagement, and even the

---

[39] Allan Millett and Williamson Murray. *Military Effectiveness*, (New York, NY, Cambridge University, 2010), 2.

appropriate goals of violence. What
makes it 'conventional' is just that it
adheres to the dominant conventions
of the time.[40]

Author Jeffrey White stated "Irregular warfare is the oldest form of warfare, and it is a

phenomenon that goes by many names."[41] IW is defined as "A violent struggle among

state and non-state actors for legitimacy and influence over the relevant population."[42]

Armour – tank and armour – reconnaissance will be discussed below to illustrate

effectiveness against hybrid threats.

Pertaining to CW, armour – tank has successfully demonstrated its effectiveness

since the Second World War. The combat power of the tank was emphasized recently in

Fraser Auld's research titled, *The Tank – An instrument of Stability*, where he concluded

MBTs provided "valuable capability for the dangerous and complex" operations of the

future.[43] Armour effectiveness was highlighted during a panel discussion titled *Irregular*

Warfare and Hybrid threats, at the Center for Strategic and International Studies. Celeste

Ward, senior policy analyst with RAND Corporation, stated, "An Armour Division is like

a tuxedo, you don't need it very often, but when you need it, nothing else will do.[44] It is

clear that given its combat power, effectiveness is achieved for armour – tank in CW.

Conventionally, assessing armour – reconnaissance effectiveness is more

complicated. In his analysis of armour - reconnaissance during World War II, Curtis

---

[40] Kenneth Payne." What is Conventional Warfare." *Department if War Studies, Kings College* (London: 2012), 1, http://kingsofwar.org.uk/2012/01/what-is-conventional-warfare/

[41] Jeffrey B. White. "Some Thoughts on Irregular Warfare." Defence Intelligence Agency. 1, https://www.cia.gov/library/center-for-the-study-of-intelligence/kent-csi/vol39no5/pdf/v39i5a07p.pdf .

[42] United States Army. "Assessing Irregular Warfare: A Framework for Intelligence Analysis". RAND Corporation, 2008. xi, http://www.rand.org/content/dam/rand/pubs/monographs/2008/RAND_MG668.pdf

[43] Fraser Auld. The Tank – An Instrument of Stability. (Canadian Forces College, 2014), 27.

[44] Irregular Warfare, Hybrid Threats, and the Future Role of Ground Forces, https://www.youtube.com/watch?v=ae4udl6EEV4

Taylor observed "direct combat was virtually unavoidable if a reconnaissance force was to be effective at all."[45] Further lessons published by the US General Board Report stated "Effective reconnaissance almost always required fighting."[46] Lessons learned from recent operations again outline how these same elements were conventionally underemployed.[47] It can be argued that this reflects the lack of understanding of armour as it is presently viewed, and the hesitation to utilize this capability in its primary role. In summary, in order for armour – reconnaissance to be effective conventionally, it must be able to fight and employment should not be limited to reconnaissance.

Within the IW environment, BGen L. Quintas, Commandant of the US Army Armor School, commented the "war on terrorism necessarily forces us to employ our tankers and scouts in non-traditional roles."[48] Adapting forces to tasks and the situation on the ground is a requirement for Operational Commanders, as long as capability is being maximized and not constrained, as agreed to by USMC General J. Mattis who remarked that forces will have to improvise to certain situations.[49] Armour – tank and armour – reconnaissance effectiveness will be analyzed next.

Armour – tank has proved effective in IW, primarily due to its protection, mobility and firepower. Analysis of the conflict in Israel with Hamas and Hezbollah illustrate the effectiveness of armour. Dr.A. Wahlman and Col B. Drinkwine highlighted the expanded role of armour – tank in COIN and urban warfare, when they stated the

---

[45] Curtis D. Taylor, "Trading the Saber for Stealth: Can Surveillance Technology Replace Traditional Aggressive Reconnaissance?" The Land Warfare Papers, The Institute of Land Warfare, (Arlington Virginia, September 2005), 3.
[46] Ibid, 3.
[47] The Royal Canadian Armour Corps in Afghanistan. *Lessons Learned - Dispatches DRAFT (2015)*, 9.
[48] BGen L. Quintas, *An Army in Transition*, Cavalry & Armor, (July 2014), 3
[49] Irregular Warfare, hybrid Threats, and the Future Role of Ground Forces: Keynote https://www.youtube.com/watch?v=E1ZM3CfWh1I

"mobility and protected firepower can at times prove of paramount importance in such environments."[50] It is clear these authors see a place for the tank in today's IW environments.

Maximizing the combat power of armour – reconnaissance in IW has been problematic. In Iraq, "Commanders chose not to employ their scouts and brigade reconnaissance troops in the role for which they were intended,"[51] tasking more robust manoeuvre elements instead. This was again supported by historian Cameron who stated US armour - reconnaissance elements lacked cavalry capability, and that:

> Exclusive employment in COIN operations, however, cloaked its inability to operate in the presence of an aggressive threat or in a fast moving combined arms maneuver operation.[52]

It is this author's opinion that cavalry is better suited than armour – reconnaissance when conducting tactical security and reconnaissance tasks. Cavalry entails a more robust maneuver element with an increased combat spirit and capability that can support the operational commander, more than those elements regarded as armour – reconnaissance. This was supported by Curtis Taylor who in his study of recent conflicts determined tempo set the condition for reconnaissance and the advance to contact was the most

---

[50] Dr. Alec Wahlman and Col Brian Drinkwine, "The M1 Abrams: Today and Tomorrow," (Military Review, Nov-Dec 2014), 13.

[51] Gregory Fontenot, E. Degen, and D. Tohn. On Point: The US Army in operation Iraqi Freedom (Ft Leavenworth, KS: Combat Studies Institute Press, 2004), 423.

[52] Robert S. Cameron. Losing Our Way: The Disassociation of Reconnaissance and Security Organizations from Screen, Guard, and Cover Missions. Military Review, 2014, 31.

frequent type of movement.[53] For the US Army, more robust cavalry elements are preferred for reconnaissance over traditional reconnaissance assets.

In the purely CA context, the RCAC maintains its two elements: armour – tank and armour – reconnaissance assets. Both are capable of performing the cavalry role and provide the robustness sought by the US Army. As observed, not all these assets are being employed in this role as well as it could be. Operational Commanders need to acknowledge that the RCAC is capable of such a role. As previously stated, doctrinally adopting cavalry terminology, together with training and education will correct this. The end result will increase combat power of CA assets.

Some theorists debate the relevancy of CW elements operating in hybrid environments. One argument is presented by Ron Tira of the Jaffa Center in Israel. He notes, "Hybrid actors are often immune to the conventional application of force applied by Israel and the US."[54] However, warfare will require modern effects at some point, as supported by Robert WIlkie who stated, "War still means applying kinetic force, no matter what moniker you put on it."[55]

This section examined the evolution of cavalry against hybrid threats. This section evaluated the effectiveness of armour – tank and armour reconnaissance in CW and IW. Armour – tank is effective in both CW and IW. Armour – reconnaissance effectiveness has been challenged in both CW and IW. Pure reconnaissance elements need to be able to fight and effectiveness is reduced in high tempo operations. General Mattis commented

---

[53] Curtis D. Taylor, "Trading the Saber for Stealth: Can Surveillance Technology Replace Traditional Aggressive Reconnaissance?" The Land Warfare Papers, The Institute of Land Warfare, (Arlington Virginia, September 2005), 7.

[54] Robert Wilkie. *Hybrid Warfare: Something Old, Not Something New*. Air & Space Power Journal. (December 2009), 2. Last accessed 23 April 2015. http://www.airpower.maxwell.af.mil/airchronicles/apj/apj09/win09/wilkie.html

[55] *Ibid*, 1.

that "Hybrid threats are going to characterize the future" although "Irregular Warfare may be the primary focus of our forces."[56] Cavalry is the better capability against hybrid threats.

Cavalry Suitability in the FSE

The FSE is characterized to be unstable and unpredictable. Although studies show a steady decline pertaining to inter-state war, the probability for such is ever present. CW threats remain present: take the recent aggression by Russia as an example. Researchers Flournoy and Brimely observed "Hybrid warfare will be a defining feature of the future security environment."[57] Canada is not immune to these threats nor the conflicts. Alliances with the USA, with NATO, and with the present Canadian Government's foreign policy, to support states such as Ukraine and Israel, it is clear that CA will continue to deploy abroad. It has been determined that the capability cavalry provides is suitable for hybrid threats. This section will analyse cavalry in the FSE by looking at the type of force required to face these hybrid threats: agile, adaptive and full-spectrum capable.

Agile and adaptive forces are a requirement in FSE. Agility is defined as, "a combination of robustness, resilience, responsiveness, flexibility, innovation and adaptation."[58] The RCAC possesses the ability to aggregate and de-aggregate its forces.

---

[56] Irregular Warfare, hybrid Threats, and the Future Role of Ground Forces: Keynote https://www.youtube.com/watch?v=E1ZM3CfWh1I

[57] M. Flournoy and S. Brimley, "The Defence Inheritance: Challenges and Choices for the Next Pentagon Team," Washington Quarterly (Autumn 2008), 60.

[58] B-GL-310-001/AG-001, Land Operations 2021: The Force Employment Concept for Canada's Army of Tomorrow, 32.

Further its heavy, medium and light components allow it to adapt its force composition.

It can operate along extended lines of communication, compared to the other BG

maneuver element, based on its echelon capability[59] thereby enabling it to support

dispersed elements. This aim is supported by the UK, who stated,

> The primary purpose of the British
> Army is combat: Armoured Cavalry
> is essential to combat…The nature of
> Armoured Cavalry will allow it to
> switch deftly between varying
> intensities of combat.[60]

CA cavalry satisfies the requirements of agility and adaptive.

A requirement in *Land Operations 2021: The Force Employment Concept for
Canada's Army of Tomorrow,* is for full –spectrum capable forces. *Land Operations 2021*
identified that "turmoil will often occur in urban areas , … densely populated cities."[61]
The RAND Corporation determined that during Operation STIKER DENIAL in the
Battle of SADR CITY, Iraq, "Heavy armor proved important during the fight, providing
firepower and an ability to withstand hits from IEDs and RPGs."[62] The UK military is
relying on its cavalry component to spearhead its land component. The UK Army
Readiness Order (ARO) identified "the role of Armoured Cavalry at the heart of the
Army's contingent capability with the Lead Armoured Task Force."[63] Cavalry can
provide full-spectrum capability to the CA. It presently serves as two of the maneuver

---

[59] The Royal Canadian Armour Corps in Afghanistan. *Lessons Learned - Dispatches DRAFT (2015),* 8.
[60] United Kingdom Ministry of Defence. *Armoured Cavalry Concept of Employment (DRAFT).* February 2015, 9.
[61] B-GL-310-001/AG-001, Land Operations 2021: The Force Employment Concept for Canada's Army of Tomorrow, 4.
[62] D. Johnson, M, Markel, B Shannon. *The 2008 Battle of Sadr City*, RAND Corporation, 2011, 10.
[63] United Kingdom Ministry of Defence. *Armoured Cavalry Concept of Employment*. (February 2015), 4.

elements within the BG. It is interoperable was witnessed during DOMOPs such as support to floods or G8/G20 summits. Cavalry is capable of conducting tasks along the spectrum of conflict to include: conducting PSO in the Balkans, and support Humanitarian Assistance in Somalia, COIN in Afghanistan and Major Combat Operations in Iraq. Cavalry is suited for full-spectrum operations, as supported by Dr. Cameron who observed that cavalry was highly effective given its versatility and tactical agility that permitted ready adaptation.[64]

This section first examined the evolution of cavalry against hybrid threats. Cavalry, subdivided as armour – tank is effective in both CW and IW. Cavalry effectiveness, considered through the lens of purely armour – reconnaissance has been hampered in both CW and IW. Given high tempo and the requirement to fight for information in today's conflicts, analysis has determined that armour – cavalry is the more robust capability versus armour – reconnaissance. This section then evaluated the suitability of cavalry in the FSE. It has been determined that Cavalry provides forces that are agile, adaptive and full-spectrum capable, which satisfies the CA requirements of its maneuver elements in the FSE. As CA is preparing to employ highly adaptive land forces dispersed in time, space and purpose, cavalry is the function with the ability to achieve this desire.

"Surveillance is not security. Surveillance does not include the active measures inherent in security missions, which both shape and protect the brigade commander's ability to maneuver free from threat interference."
- Dr. Robert S Cameron

---

[64] Robert S Cameron. "To Fight or Not to Fight," Combat Studies Institute Press, US Army Combined Arms Center (Fort Leavenworth, Kansa), 574. Last accessed 21 April 2015, http://usacac.army.mil/cac2/cgsc/carl/download/csipubs/cameron_fight.pdf

CONCLUSION

A skewed understanding of the employment of armour exists and this capability is now misunderstood. This paper argued that perceiving CA armour – reconnaissance assets, caused misemployment, underutilization, and decreased optimization of this capability. Adopting the *cavalry* spirit and terminology postures the CA and Operational Commanders to optimize performance and effects at the operational and tactical level.

The first section argued why there was a need for a change. It examined how the CA has utilized its armour the last twenty-five years. Nature of missions the last twenty-five years have caused an atrophy of employment of armour. It analyzed our allies and observed how they have adopted and employ cavalry, while the CA has not. It then offered three considerations that would see cavalry fostered as an employment concept: training, education and amendment of doctrinal employment concept and narrative to cavalry. These considerations will assist in correcting any underemployment of armour within the CA and optimize and rejuvenate this capability. The second section of this paper analyzed the doctrinal role of cavalry within ADO. It was determined that the concept of cavalry employment was compliant with present doctrine, although change to narrative terminology should be considered. Cavalry was determined to be a feasible capability in ADO, given the combat effectiveness it provides operational commanders. It was identified the RCAC possess two of the three manoeuvre elements of the BG and remains a key contributor in the battle space. Cavalry capabilities satisfied the demands sought by the CA in ADO. The last section examined cavalry against hybrid threats within the FSE. Against hybrid threats, armour – tank has been determined to be effective. It was noted that with high tempo and the requirement to fight for information

in today's conflicts that cavalry is a more robust employment concept compared to armour – reconnaissance, as it optimizes capability and provides options to Operational Commanders. Cavalry was then determined to be suitable in the FSE, given it provides forces that are agile, adaptive and full-spectrum capable.

The Army's mission is "to generate combat-effective, multi-purpose land forces to meet Canada's defence objectives."[65] Terms such as armour –tank, armour – reconnaissance and reconnaissance regiments are too limiting to Operational Commanders. Armour, specifically armour – reconnaissance, will continue to be misunderstood unless there is a change. As Curtis Taylor stated, "Gathering truly useful information requires fighting."[66] As a manoeuvre element, CA armour - reconnaissance is capable of more than just reconnaissance to include many armour-tank battle task standards (BTS) against a similar or lighter equipped enemy.

Conflict is a human activity that will occur primarily on land. Army elements will continue to be committed to such conflicts. It is therefore necessary to maximize the capability of the CA. In order to maximize capability and to start thinking more aggressively, there is a requirement to change. Through training at the tactical level, education at the operational level and assuming universally and doctrinal accepted narrative, the CA will optimize its RCAC capability. Adopting the cavalry concept of employment, spirit and terminology, this rejuvenated focus will optimize capability at the operational and tactical level.

---

[65] The Army: Advancing with Purpose, 2nd Edition (Ottawa: LFC, 2009), 14.
[66] Curtis D. Taylor, "Trading the Saber for Stealth: Can Surveillance Technology Replace Traditional Aggressive Reconnaissance?" The Land Warfare Papers, The Institute of Land Warfare, Arlington Virginia, September 2005, 23.

As Dr. Robert Cameron stated, "Cavalry's ability to shape the battlefield and ensure freedom of maneuver for friendly forces is undermined."[67] This will continue to be the situation for the CA, specifically if continued to be under employed and branded as reconnaissance.

---

[67] Robert S. Cameron. Losing Our Way: The Disassociation of Reconnaissance and Security Organizations from Screen, Guard, and Cover Missions. (Military Review, 2014). 55.

BIBLIOGRAPHY

Army Command Information Network. 04/15, 15 January 2015. Last accessed, 27 April 2015, http://www.arcic.army.mil/Home/index.aspx

Army Technology. Last accessed 8 May 2015, http://www.army-technology.com/news/newsgd-receives-35bn-order-from-uk-mod-for-scout-sv-platforms-4360744

Auld, Fraser. "The Tank – An Instrument of Stability." Joint Command and Staff Program, Canadian Forces College, 2014.

Australia. Royal Australian Army. Last accessed 2 May 2015, http://www.army.gov.au/Who-we-are/Corps/Royal-Australian-Armoured-Corps

Cameron, Robert. Losing Our Way: The Disassociation of Reconnaissance and Security Organizations from Screen, Guard, and Cover Missions. (Military Review, 2014).

Cameron, Robert. "To Fight or Not to Fight," Combat Studies Institute Press, US Army Combined Arms Center, Fort Leavenworth, Kansas. Last accessed 21 April 2015, http://usacac.army.mil/cac2/cgsc/carl/download/csipubs/cameron_fight.pdf

Canada. Department of National Defence. B-GL-300-001/FP-001, *Land Operations*. Kingston, 2008.

Canada. Department of National Defence. B-GL-310-001/AG-001, *Land Operations 2021: The Force Employment Concept for Canada's Army of Tomorrow*. Ottawa: DND Canada.

Canada. Department of National Defence. B-GL-321-005/FP-001, *Battle Group in Operations*. Ottawa: DND Canada, 2012.

Canada. Department of National Defence. *Designing Canada's Army of Tomorrow*. Kingston 2011.

Canada. Department of National Defence. *The Army: Advancing with Purpose*, 2nd Edition. Ottawa: 2009.

Canada. Department of National Defence. *Land Operations 2021 – ADO: A Force Employment Concept for Canada's Army of Tomorrow*.

Center for Strategic and International Studies. "Irregular Warfare, hybrid Threats, and the Future Role of Ground Forces." Keynote Part 1, Last accessed 8 May 2015,https://www.youtube.com/watch?v=E1ZM3CfWh1I

Center for Strategic and International Studies. "Irregular Warfare, hybrid Threats, and the Future Role of Ground Forces." Keynote Past 2 Last accessed 8 May 2015, https://www.youtube.com/watch?v=ae4udl6EEV4

Department of Public Information, United Nations. Last accessed 4 May 2015, http://www.un.org/en/peacekeeping/missions/past/unprofor.htm

Deville, MG Arnaud Sainte-Claire. US Army. *E-Armor*. Oct – Dec, 2014. Last accessed 4 May 2015, http://www.benning.army.mil/armor/eARMOR/content/issues/2014/OCT_DEC/Sainte-Claire.html

Flournoy, M. and S. Brimley. "The Defence Inheritance: Challenges and Choices for the Next Pentagon Team," *Washington Quarterly*, Autumn 2008, 60.

Fontenot, Gregory, E. Degen, and D. Tohn. On Point: The US Army in operation Iraqi Freedom. Ft Leavenworth, KS: Combat Studies Institute Press, 2004.

France. Defence. Government of France. http://www.defense.gouv.fr/terre/formation-entrainement/formation/specialisee/ecole-de-cavalerie

Headquarters, Department of the Army. *FM 17-95 Cavalry Operations.* Washington, DC, 1996.

Johnson, D and M. Markel, B Shannon. *The 2008 Battle of Sadr City*, RAND Corporation, 2011.

Millet, Allan and Williamson Murray. *Military Effectiveness*. New York, NY, Cambridge University, 2010.

Payne, Kenneth." What is Conventional Warfare." *Department if War Studies, Kings College* (London: 2012), 1, http://kingsofwar.org.uk/2012/01/what-is-conventional-warfare/

Quintas, BGen L. "An Army in Transition*" Cavalry & Armor*, July 2014.

Schneider, James. "TE Lawrence and the Mind of an Insurgent," (Army Journal July 2005). 34.

Spolizino, Thomas, "Not Just Infantry with Tanks: Who We Should Be And Why The Army Needs Us To Be It," Last accessed 21 April 2015, http://www.benning.army.mil/armor/earmor/content/issues/2014/JUL_SEP/Spolizino.html

Taylor, Curtis. "Trading the Saber for Stealth: Can Surveillance Technology Replace Traditional Aggressive Reconnaissance?" The Land Warfare Papers, The Institute of Land Warfare, (Arlington Virginia, September 2005), 3.

The Royal Canadian Armour Corps in Afghanistan. *Lessons Learned - Dispatches DRAFT (2015),* 10.

The Royal Canadian Armoured Corps Information Paper – A Corps Advancing with Purpose, Draft (October 2013).

The Royal Canadian Dragoons. *Regimental Catechism.* (June 1998), 39.

United Kingdom. Ministry of Defence. Last accessed 2 May 2015, http://www.army.mod.uk/armoured/25398.aspx

United Kingdom. Ministry of Defence. *Armoured Cavalry Concept of Employment.* February, 2015.

United States Army. "Assessing Irregular Warfare: A Framework for Intelligence Analysis". RAND Corporation, 2008. Last accessed 15 April 2015, http://www.rand.org/content/dam/rand/pubs/monographs/2008/RAND_MG668.pdf

USMC, 36th Commandant's Planning Guidance, 2015, 2. Last accessed 8 May 2015, http://www.hqmc.marines.mil/Portals/142/Docs/2015CPG_Color.pdf

Vacca, W. and M. Davidson. *The Regularity of Irregular Warfare.* (Parameters, 2011), 23. http://strategicstudiesinstitute.army.mil/pubs/parameters/Articles/2011spring/Vacca-Davidson.pdf

Wahlman, Alec and Col Brian Drinkwine, "The M1 Abrams: Today and Tomorrow," *Military Review*, Nov-Dec 2014.

White, Jeffrey. "Some Thoughts on Irregular Warfare." Defence Intelligence Agency. 1, https://www.cia.gov/library/center-for-the-study-of-intelligence/kent-csi/vol39no5/pdf/v39i5a07p.pdf .

Wilikie, Robert. "Hybrid Warfare: Something Old, Not Something New". *Air & Space Power Journal.* December 2009. Last accessed 23 April 2015. http://www.airpower.maxwell.af.mil/airchronicles/apj/apj09/win09/wilkie.html

Wittgenstein, Ludwig. *Tractatus Logico-Philosophicus*, (Keagan Paul: London, 1922), 356. Last accessed 21 April 2015, http://people.umass.edu/phil335-klement-2/tlp/tlp-ebook.pdf