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SURVIVING CONTACT: HOW OMITTING FORCE ON FORCE CAN INCREASE THE LIKELYHOOD OF DEFEAT

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AIM

1. The aim of this service paper is to establish the importance for the Canadian Army (CA) to integrate the requirement of force on force (FoF) exercises in its training doctrine and to recommend methods by which this could be achieved. While the Canadian Army's training system is undoubtedly effective at producing effective warriors, this paper will demonstrate that the lack of regular FoF training has created scars which may prove dangerous in armed conflict. This weakness, however, can be alleviated by changing the way the CA thinks about training and force certification.

INTRODUCTION

2. The CA's individual training (IT) and collective training (CT) framework is predicated on developing competent warriors capable of operating under demanding conditions and executing their task to a high standard. To assess the effectiveness of each warrior, the CA training system depends on the certification of the individual's competence through either completing performance objective (PO) checks or achieving Battle Task Standards (BTS). This system ensures that each soldier meets a threshold of performance and that the CA as whole maintains a level of excellence which Canadians demand of their military.

3. Unfortunately, while the CA IT and CT system is excellent at producing competent technicians, it fails to ensure that its members will be able to effectively apply their skills when confronted with the hardship and inherent chaos of battle. This shortfall occurs because the training system is designed to certify readiness as opposed to recreating battlefield conditions. For example, an offensive operation will require a force to neutralize an enemy's covering force,

attack the main defensive position, and react to a counter-attack. Very little deviation from this standard scenario ever occurs, and the enemy is often tightly constrained by design. Hence, by neglecting to include FoF as part of its training doctrine, the CA is creating mental rigidity in its personnel instead of fostering agility. Consequently, this service paper will argue that training in FoF scenarios offers the CA unparalleled advantages which help prepare its members for the rigours of the battlefield. Subsequently, courses of action will be suggested to enable the CA to adopt FoF as part of its training doctrine by leveraging available resources. Finally, the paper will assess the viability of certain resources not currently held by the CA to support FoF training.

DISCUSSION

FORCE ON FORCE TRAINING – AN ESSENTIAL ASPECT OF TRAINING

4. Sun Tzu said, “water conforms to terrain in determining movement . . .”¹ This implies that water coursing through a river bed will erode the ground over which it flows, deepening the banks around it, and so constrain itself ever more to follow the course it has always taken. This interpretation suggests that, in training our forces to constantly attack an enemy position where he is strongest, we may inadvertently create a mental inflexibility that will preclude soldiers from seeking out opportunities offered by an enemy’s mistakes or weaknesses.

5. Undeniably, there is a legitimate requirement to certify that individuals and groups can achieve certain POs and BTS. However, this necessity has had the adverse effect of templating training. Even CA’s seminal exercise, MAPLE RESOLVE (MR), which is purported to be FoF, remains largely scripted. Though the adversary is often free to choose his tactics, there are still pre-determined offensive, defensive and stability operation phases which constrain the opposing

¹ Sun Tzu, *The Art of War*, ed. and trans. J.H.Huang (New York: Quill William Morrow, 1993), 68.

force (OPFOR). Therefore, the need to meet BTS forces units to ignore more innovative courses of action to complete certain tasks in order to get certified operationally ready.²

6. This point is compounded by Canada's own experience in Kandahar. In 2006 Canadian soldiers were seen shooting blindly over walls and routinely succumbed to improvised explosive devices (IED). After six years of fighting, empowered with effective counter-IED tactics techniques and procedures (TTP), these soldiers became battle-hardened veterans whom insurgents avoided confrontations with unless an overwhelming advantage could be achieved. Unfortunately, this rise in proficiency came at the cost of 159 CAF member's lives. This is not to say that loss of life can be negated through training, yet the undeniable rise in proficiency the CA achieved through the crucible of battle demonstrates the worth of replicating the conditions soldiers will face when encountering an intelligent, agile opponent.

7. Before continuing further, it is necessary to better define the concept of agility to demonstrate that it can only truly be achieved when facing a thinking enemy in an unconstrained setting. According to the Albert-Hayes model, Agility is defined by six characteristics:

- a. Robustness. the ability to maintain effectiveness across a range of tasks, situations, and conditions;

² The author of this service paper was 2 R22eR's officer commanding Combat Support company and the battalion S3 during Ex MR 18. In holding these functions, he led the staff effort in planning and overseeing operations on behalf of the CO. During the offensive phase of training, the battalion was tasked to destroy an enemy position protecting key crossing points over a gap, and thus support the Brigade's efforts to cross the gap and destroy the enemy's main objective. While these crossing points were important, the position could have been bypassed entirely. The CO and staff of 2 R22eR initially wanted to fix the enemy on their objective in order to allow Brigade to cross further to the North. Once the brigade had crossed the GAP, 2 R22eR's objective would have had their lines of communication cut off, thus either forcing their surrender or facilitating their subsequent destruction. Instead, 2 R22eR was forced to directly attack their objective, resulting in significant casualties taken by the unit and the slowing down the overall brigade operation. OCTs, after the fact, admitted that the forced attack was motivated by a requirement to certify one of the battalion's BTS'.

- b. Resilience. the ability to recover from or adjust to misfortune, damage, or a destabilizing perturbation in the environment;
 - c. Responsiveness. the ability to react to a change in the environment in a timely manner;
 - d. Flexibility. the ability to employ multiple ways to succeed and the capacity to move seamlessly between them;
 - e. Innovation. the ability to do new things and the ability to do old things in new ways; and
 - f. Adaptation. the ability to change work processes and the ability to change the organization.³
8. As these characteristics entail, agility is defined by one's ability to react and adapt to unexpected events or take advantage of unforeseen opportunities. Though such situations can be practiced through a carefully designed training scenario, it is unlikely the five operational functions can be employed as nimbly by an exercise control (EXCON) cell than by a thinking commander actively attempting to defeat his opponent in the field.⁴ This is reflected by John Boyd's OODA Loop:

Boyd broke from the physical and spatial parameters that limited predecessor and instead emphasized the temporal and psychological. Surprise, in effect, is the

³ David S. Alberts, Richard E. Hayes, *Power to the edge: Command and Control in the Information Age* (U.S. Department of Defense Command and Control Research Project, 2005), 128.

⁴ Department of National Defense, B-GL-300-001/FP-001, *Land Operations* (Ottawa: DND Canada, 2008), 4-18.

prime goal, and to achieve this Boyd advocated operations at a faster tempo than that of one's adversary.⁵

Hence, a group of soldiers reporting to, and taking directions from EXCON could never match the potential speed of execution, mental agility, and surprise that an adversarial commander in the field could achieve by attempting to defeat his opponent.

9. This assertion is supported by Jim Greer, a retired United States (US) Army officer, Vice President of the Center for Strategic Leadership and Design at ALIS, Inc., and a former Director of the School of Advanced Military Studies. In his article, "The Weaker Foe," Greer asserts that:

Generating new, challenging, complex problems for opponents is largely a cognitive task, requiring critical, creative, and systems thinking to see and understand opportunities; generate ideas that can become problems for the enemy resident within those opportunities; the tactical and technical expertise necessary to translate those ideas into action on the battlefield; and of course the leadership necessary to develop individuals and units who can routinely generate and take advantage of these problems. As a cognitive task it should be developed in part through education and in part through interactive practicum employing simulations and gaming.

In fact, current research demonstrates that gaming may be the most important approach to developing leaders who can generate problems for future opponents. Gamers perform 10-20 percent higher in terms of perceptual and cognitive abilities. Video games increase "fluid intelligence," which is the ability to adapt, to meet new problems, and to develop new tactics.⁶

Though Greer uses the example of video games as a means of developing "perceptual and cognitive abilities," it can be argued that a similar outcome can be institutionally achieved through FoF training. Indeed, much like the type of video games Greer references, FoF training

⁵ S. E. McIntosh, "The Wingman-Philosopher of MiG Alley: John Boyd and the OODA Loop," *Air Power History* 58 (2011, Winter): 26.

⁶ Jim Greer, "The Weaker Foe," *The Strategy Bridge* (7 March 2017). <https://thestrategybridge.org/the-bridge/2017/3/7/the-weaker-foe>.

confronts an individual or team with a thinking, reactive opponent who continuously reacts the adversary's decisions and actions.⁷

10. Finally, it could be argued that FoF training is the only means by which deception can truly be practiced. As Sun Tzu stated:

[Through deception]. . . have a capability but appear not to; make use, but appear not to; be near but appear far, or be far but appear near; show gains to lure them; show disorder to make them take a chance; where superior, set protections against them; when strong, avoid them; if of high moral, depress them; seem humble to fill them with conceit.⁸

As long as one's adversary is bound by constraints he would be free of in a real engagement, it will remain near impossible to ascertain whether an effort to deceive him would have succeeded. After all, the essence of deception lies not in causing your opponent to think something but forcing him to act in a way that will prove advantageous to the overall plan. A tethered enemy cannot behave in this way.

LEVERAGING CURRENT RESSOURCES TO SUPPORT FORCE ON FORCE

11. Given the importance of FoF training, it should be integrated as part of the CA's standard training doctrine. The following section will offer certain recommendations as to how this can be achieved.

12. One asset which could greatly support FoF training is computer-assisted exercise (CAX) platforms.⁹ These systems offer the possibility of training large formations in a virtual environment at vastly reduced resource costs compared to a field training exercise (FTX).

Though perhaps this option seems obvious, previous iterations of exercises LION NUMERIQUE

⁷ Ibid.

⁸ Sun Tzu, *The Art of War* . . . , 40-41.

⁹ Virtual Battle System 2 (VBS2) and Joint Conflict and Tactical Simulation (JCATS).

and UNIFIED RESOLVE (UR) have sought to emulate the standard BTS validation template of a FTX. Moreover, the imperative to ensure training audiences successfully completed their training has often squandered valuable training opportunities. For instance, on UR18, following the reduction of a unit to 25% combat effectiveness, said unit was artificially replenished up to 90% to allow the brigade's training to continue unimpeded. Though anecdotal, this example highlights the inability of the CA to divert itself from its standard training template.¹⁰

13. Furthermore, the CAX template could be leveraged for North American Treaty Organization (NATO) interoperability training. By contracting a company to set up servers and training platforms in different geographical regions, NATO partners could form Combined Brigade-Groups and train in the same simulation. Beyond the advantages of augmenting interoperability, this approach would allow NATO partners to face off against each other, thus forcing commanders and staff to adapt to unfamiliar TTPs and equipment. Though no such system currently exists current technology could support such a training platform.¹¹

14. Beyond the synthetic environment, certain procedural steps could be taken to facilitate immersive FoF training to take place during FTXs. For instance, allowing FoF training to take place without deliberate partitions between offensive, defensive and stability operations would enable commanders to have more freedom of maneuver on top of exercising oft-ignored enabling operations.

¹⁰ These examples and assertions are supported by the author's 17 years experience as an infantry officer to include four years of work-up training; 4 UR and MAPLE GUARDIAN/MR exercises; numerous CAX supported exercises and courses including LION NUMÉRIQUE 15 and 17, ATOC, AOC, ATAC and CTCC.

¹¹ This assertion is made on the basis that Massive Multiplayer Online games connect millions of players across the globe by having players install software on their personal computers and connecting remotely to servers maintained by gaming companies. Therefore, it goes without saying that it is technologically feasible for a company to develop a training platform which would enable simultaneous training to occur across multiple locations.

15. Additionally, FoF training could be conducted for sub-units and bellow at minimal costs given that operations conducted at this level are often fairly prescriptive and contained in terms of geography and resources. This could be achieved by tasking the OPFOR with the mission to defeat the ‘blue force,’ resulting in the learning potential from training being maximized for both all parties. This type of training would also help develop the perceptual and cognitive abilities, and agility of commanders.

16. As demonstrated above, the CA can leverage existing resources to enable realistic FoF training to occur. However, beyond the question of ability to conduct FoF training lies the issue of willingness to significantly alter the CA’s approach to training. Though a comparative analysis of the cognitive impacts of training methodologies lies beyond the scope of this service paper, here are a few considerations which could require further attention.

a. Retired Lieutenant-Colonel and psychologist Dave Grossman emphasized the importance of concluding training with ‘victories.’ Yet, it goes without saying that by the very nature of FoF training, one of the parties will end up ‘losing.’¹² The focus of FoF should, therefore, be shifted away from the imperative of winning, toward the necessity of learning from training. Such a shift, however, would require all levels of the chain of command to impose a cultural shift which is not likely to be easily accepted given the predominance of alpha personality types in the combat arms.

b. Relatedly, to maximize the learning potential from FoF training, the debriefing method of the OCTs will need to be adapted. Instead of focussing on results, they will

¹² Dave Grossman, Loren W. Christensen, *On Combat: The Psychology and Physiology of Deadly Conflict in War and in Peace* (Warrior Science Publications, 2007), 135.

need to adopt the ‘See, Think, Do’ model used by the USAF.¹³ This method, focussed on process and augmenting the speed of a pilot’s OODA loop, will allow participants of FoF scenarios to learn from cognitive mistakes and be better prepared the next time they face a thinking enemy

FORCE ON FORCE ENABLED THROUGH EXTERNAL RESSOURCES

17. Though it is possible to exercise FoF through means integral to the CA, several external resources could potentially help support this type of training:

- a. Artificial Intelligence (AI). Current AI technology cannot replicate human behaviour. Assuming the technology will one day allow for this, leveraging AI to control an enemy force will never reproduce the experience of a human dual on the battlefield. Indeed, an AI would have to be calibrated to think at the speed of humans, in a way similar to humans, which is inherently antithetical to its very nature.
- b. Private companies. Companies such as Tactical Air and Draken provide pilots flying different platforms from those flown by the US Airforce to create a realistic training environment for its audience.¹⁴ Unfortunately, no private companies offer similar services for conventional land forces operating against near-peer troops at the platoon level or above. Even if this service were provided, it is likely that it would be extremely cost prohibitive to employ.

¹³ Steve Luczynski, “#Leadership: What Did you See?” *The Strategy Bridge* (6 April 2016). <https://thestrategybridge.org/the-bridge/2016/4/6/leadership-what-did-you-see>.

¹⁴ The Black Horse Association, “11th Armored Cavalry Regiment History,” accessed 13 October 2018, <http://www.blackhorse.org/regimenthistory.cfm>.

c. Dedicated training units. The US Army has tasked the Blackhorse Cavalry Regiment to act as an OPFOR for brigades attending the National Training Center.¹⁵ Mimicking the US approach, a unit could be tasked to provide the Canadian Maneuver Training Center (CMTC) a robust OPFOR. Like Blackhorse, that unit could train to emulate the TTPs of an enemy and learn to operate different vehicles than those of the CA to increase the realism of training. Unfortunately, this option does not seem viable given the current rationalization of personnel year (PY). Though creative solutions could be sought after, such as creating a rotation of units operating in that role on a yearly or bi-yearly basis, the strain this would put on the resilience of soldiers and their families would be too prohibitive.

18. Ultimately, given the current technological, budgetary and operational constraints placed on the CA, seeking external solutions to enable FoF training seems like an unrealistic option.

CONCLUSION

19. Though FoF training is extremely valuable in developing agile and responsive leaders capable of adapting to the rigours of battle, it cannot replace the more structured type of training the CA is used to conduct. Instead, it must complement it and be used to test practitioners of lethal force once they have demonstrated a satisfying level of technical proficiency.

20. While AI, private companies and dedicated units may one day revolutionize the CA's approach to FoF training, current technological and resource constraints preclude these solutions from being viable.

¹⁵ Skies Magazine, "Playing the part: USAF 18th Aggressor Squadron," last modified 27 July 2017, <https://www.skiesmag.com/features/playing-part-usaf-18th-aggressor-squadron/>; U.S. Air Force, "Nellis Aggressor Squadron Inactivated," last modified 29 September 2014, <https://www.af.mil/News/Article-Display/Article/502924/nellis-aggressor-squadron-inactivated/>.

21. Fortunately, the CA possesses the resources necessary to support FoF training, either by leveraging the flexibility afforded to it by the CAX platform or by forcing deliberate changes in its approach to FTXs.

RECOMMENDATION

22. To facilitate the adoption of the FoF model, the most impactful changes would be felt at the IT level. It is therefore recommended that the Combat Training Center be tasked to integrate FoF CAX training in the Army Tactical Operation Course and Combat Team Commander Course. The Canadian Army Command and Staff College should receive similar direction for the Army Operation Course.

23. Given its resources and mandate, it is recommended CMTC be tasked with:

- a. developing a subject matter expert cell in FoF to support other formations in their implementation of the training;
- b. integrate true FoF training in future iterations of both UR and MR; and
- c. Develop a proposal for the development of a NATO-wide CAX training software.

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