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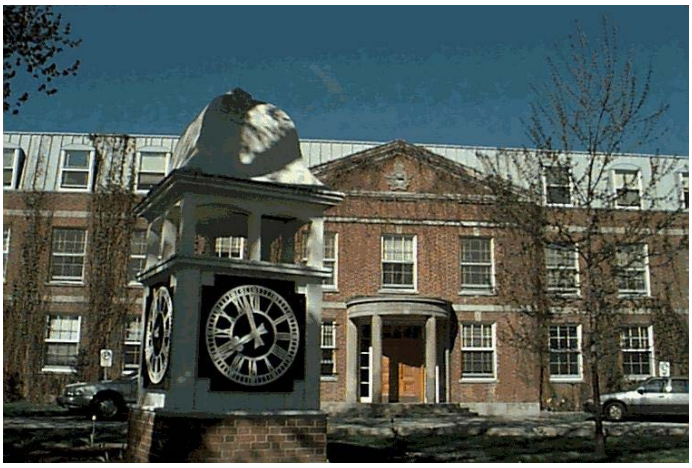

AIRBORNE FORCE EMPLOYMENT CONCEPT: PROJECTING COMBAT POWER IN TANDEM WITH OUR ALLIES

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JCSP 45

Service Paper

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Word Count: 2362

Nombre de mots: 2362

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AIM

1. The aim of this paper is to provide some recommendations for the future employment concepts of airborne forces across the spectrum of conflict for the Canadian Army (CA). Although airborne operations are not new to the CA they have been limited since World War II, nonetheless many nations retain this rapidly deployable capability. Recently airborne operations were conducted in Iraq by US forces, aimed at seizing airfields to build up forces, and by French forces in Mali to defeat Islamist insurgents. The CA is continually seeking out opportunities within their global engagement strategy (GES) to bolster strategic relationships with nation's specific training events with our allies. During Op REASSURANCE, the CA was specifically requested to participate through the deployment of airborne forces[1]. Furthermore, the future of warfare is becoming inherently joint as a means of rapidly projecting combat power by land, air and sea[2]. With the continued uncertainty of threats arising around the globe, we need to generate our ability to respond to events without hesitation. Airborne forces will provide the required response and resolve. This paper will not look at the lift requirements from a Royal Canadian Air Force (RCAF) perspective nor will it look at recommending specific platforms for ground mobility, however the latter must be compatible with our lift assets from an aerial delivery or air land roll-on roll-off concept.

INTRODUCTION

2. In 2017, the Commander CA issued the Master Implementation Directive (MID) that provided the direction and guidance for the furthered construct of Light Forces. The MID looks at leveraging the established relationships with our allies, particularly the United States, with a view of increasing our interoperability, sharing tactics, techniques and procedures. Inward looking, we are refining our air land integration with the RCAF supporting their basic and advanced tactical courses to highlight only a few. Within our doctrine airborne forces are forces specifically organized, equipped and trained for delivery by airdrop or air landing into an area to seize objectives[3], thus a unit being deemed airborne does not imply that the entirety of a unit needs to be delivered via parachute, but a portion of the force and equipment can, closely mirroring the MID.

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[1] Department of National Defence, DLFD SI-5, *Master Implementation Directive – Light Forces (*Ottawa: CA 2017), F-25/40.

[2] Joint Chiefs of Staff, *Joint Doctrine for Rear Area*, JP3-10 (Washington, D.C.: Joint Staff USAF Dir, 1996), I-6.

[3] Department of National Defence, B-GL-300-001/FP-001, *LAND OPERATIONS* (Ottawa: DND Canada 2008), 7-35.

3. The versatility of being airborne provides the requisite capability nested within waypoint 2018 which outlines; responsiveness, platform agnostic and unique environment's as utility of light forces, which in turn could be fulfilled by an airborne designated unit. In order to achieve this and highlight the usefulness of airborne forces the following lines of effort (LoE) will be examined. LoE 1 will look at domestic response to meet the requirements outlined within Canadian defense policy; LoE 2 speaks to the threat environment and global projection of airborne forces, and lastly a look at how future capability could assist airborne forces by moving to automation for precision guided insertions and unmanned platforms for support.

DISCUSSION

LoE – 1: Domestic reach

4. As climate change around the world continues to influence future economic trends, the government of Canada (GoC) faces new challenges with events occurring in isolated areas, particularly the Arctic region (AR). The AR represents an important international crossroads where issues of climate change, international trade, and global security meet[4]. Aside from the standing search and rescue (SAR) operations, airborne forces could assist in fulfilling a critical demand if a large scale hostile or friendly event transpired within this rugged tundra. These tasks could be in direct support of SAR or as a stand- alone operation; with the force projection of soldiers and equipment on short-notice. Possessing a conventional parachute capability implies preparedness, as many governments hold this as a strategic asset[5], and are deployed to situations when additional personnel are required. It could be argued that this is achievable with any ground force (light or mechanized); however the CA does not hold a large stockpile of over snow vehicles, optimized and capable of travelling a significant distance. As the CA looks to enhance its ground mobility capabilities to meet the challenges faced by Canada's robust landscape, the CA must continue to use it as a training ground. By doing so it will improve our own capacity to operate in the Arctic, work alongside our Canadian Ranger Patrol Group (CRPG) and become a leading nation amongst our allies. As a means of validation, conducting airborne operations within Canada will achieve some economies of effort. Retaining annual training events like Op NANOOK will address the need to conduct joint exercises with Arctic allies and partners[6]. Airborne forces need to be the forerunners taking point on this endeavor. It will drive our ability to shoot, move and communicate in extreme conditions, and provide an appeal to the GoC as a suitable option for reach and response in the Arctic. It will foster interoperability with allied countries, US, UK or NATO as we continue to project ourselves globally and to improve our joint and combined planning from CONOPS to sustainment. This

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[4] Department of National Defence, D2-386/2017E, *Strong, Secure, Engaged, Canada's Defence Policy.* (Ottawa: CA 2017), 50.

[5] Major Paul Scanlon, "Is parachute capability still relevant to modern expeditionary operation's?" *Australian Army Journal*, Vol 11, no. 3 (Summer 2012): 41

[6] Department of National Defence, D2-386/2017E, *Strong, Secure, Engaged, Canada's Defence Policy. (*Ottawa: CA 2017), 53.

will further be enhanced as the Royal Canadian Navy brings online their Arctic Operational Patrol Ship (AOPS).

LoE – 2: Global Relevance

5. As natural disasters continue to devastate countries through the destruction of vital infrastructure, airborne forces can play a pivotal role during humanitarian aid relief. Parachute capability still provides the ability to insert personnel or materiel in denied, austere or remote areas[7]. Airborne forces are capable of gaining access to remote areas that are lacking open ground lines of communications (GLoC). In addition to the delivery of personnel and goods via parachute, airborne forces need to possess the inherent ability to conducted austere runway certification and modification. The ability to establish this vital access node would permit the inflow of resources (personnel and equipment) on land and alleviate the strain placed upon naval assets, assuming there are function ports or situated close to a littoral area.

6. Our allies from the U.S. and U.K. maintain rapidly deployable airborne forces with a compliment of capabilities. These airborne forces are designated as a global reaction force (GRF) as depicted within their state policy and doctrine. Light-capable forces must be capable of rapid deployment through a variety of means and be versatile in terms of mobility rather than being tied to any particular platform[8]. Similar to the aforementioned LoE 1, on interoperability, the CA should look at designating each light infantry battalion (LiB) within the regular force as an airborne unit. This designation will allow for all combat arm supporting units to identify specific sub-units as airborne and in direct support. The LiBs could conduct combined training events with our allies during periods of high readiness. Having a battalion group size element will enable development of capability, enhanced sharing of information to encapsulate within our doctrine. To build competencies, parachute company groups (PCGs) could integrate with multiple nations for periods of 2-3 months, conducting small unit exchanges on an annual basis.

7. The current operating environment (CoE) has evolved and the "adversary most likely presents unique combinational threats[9]". As countries deal with an increased presence of non-state actors, the probability of state on state conflict is becoming a reduced probability. Although the CoE sees few circumstances when a large-scale airborne operation is required, parachute operations remain a viable tactical option[10]. The tactical option that airborne operations provide is centered on the theory regarding the future battle space. The future battle space views the area of responsibility (AOR) as expanded. This idea is founded on the understanding of adapt and dispersed operations (ADO), outlined in Waypoint 2018, the CA's long-term look of future requirements. Advancement in Command and Control (C2) networks enable mission command and information sharing that aid in succeeding in ADO. ADO is built on the premise that highly adaptive land forces will be dispersed in terms of time, space and

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[7] Major Paul Scanlon, "Is parachute capability still relevant to modern expeditionary operation's?" *Australian Army Journal*, Vol 11, no. 3 (Summer 2012): 39.

[8] Department of National Defence, *Waypoint 2018*: *The Canadian Army Advancing Toward Land Operations 2021* (Ottawa: DND Canada 2015), 15.

[9] Frank G. Hoffman, Hybrid Threats: Reconceptualizing the Evolving Character of Modern Conflict (Washington, DC: National Defense University, Institute for National Strategic Studies, 2009), 5.

[10] Department of National Defence, B-GL-300-001/FP-001, *LAND OPERATIONS* (Ottawa: DND Canada 2008), 8-5.

purpose – throughout the width and depth of the battle space in order to create and exploit opportunities[11]. Implementing a command model that seeks to push decision making and information sharing to the lowest level, as explored by Albert and Hayes, airborne forces lend themselves well to this idea.

8. It could be argued that airborne forces are more susceptible to attack by adversaries do to a lack of armour protection. This could be mitigated when operating in small dispersed entities within complex terrain. Recent conflicts between Russian and Ukraine forces show how technology is proving just as deadly for mechanized forces, "the big killer of IFVs is artillery sub-munitions and thermobaric warheads[12], capability that is equally available to non-conventional adversaries. As technology advances exponentially, our understanding of the future of warfare is uncertain. "It is noteworthy and somewhat puzzling that the organizational structure of an airborne unit of action has remained largely intact since its inception[13]". Not entirely accurate, modular and scalable would be a more precise articulation of airborne forces. Increased attention given to electronic warfare, ISR and influence activities are all force multipliers when employed early within an ADO supporting follow on forces.

LoE – 3: Future Capabilities

9. Airborne forces need to rely on advancements in technology for insertion of personnel, delivery of sustainment, light weight support weapons and unmanned systems. Battalion group airborne forces need to retain the current mass drop method of delivery. The inherent risk with conducting mass drop with directional parachutes is still the biggest limiting factor as identified within the parachute trials and evaluations cell at the Canadian Army Advanced Warfare Center. Precision parachute capabilities should be retained for the interim by combat support entities and SOF. Nevertheless, failing to embrace new parachuting technologies, "we have reduced the relevance and effectiveness of our airborne forces[14]". New technologies could see a mass precision drop of PCG size elements in order to create stand-off of from AD weapons or to use ground that is more restrictive. Conventional airborne units could be dropped further behind enemy lines or in areas away from air defense threats[15]. Further shielding of airborne forces could be through the uses of unmanned sensors. These sensors include aerial vehicles (UAVs), ground vehicles (UGVs) and unattended sensor nets[16]. When coupled with organic medium range anti-armour (AA) or indirect fire (IDF) weapons they become force multipliers. As part of our interoperability, airborne forces could have access to additional direct fire (DF) platforms either from attack helicopters (AH) or fighter jets (CAS). To sustain airborne forces, the

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[11] Department of National Defence, *Toward Land Operations 2021: Studies in Support of Army of Tomorrow Force Employment Concept* (Ottawa: DND Canada 2009), 127.

[12] Dr. Phillip A Karber, "*Lessons learned from the Russo-Ukrainian War: Personal Observations*" (Johns Hopkins Applied Physics Laboratory & U.S. Army Capabilities Center, 2015), 37.

[13] Daniel Husek and Scott A. Natter, "Airborne next: *rethinking airborne organization and applying new concepts*" (Naval Postgraduate School, DSpace Repository, 2015), 7.

[14] Monty, "The Future of Airborne Forces", Think Defence (blog), 27 Apr 13, https://www.thinkdefence.co.uk /2013/04/the-future-of-airborne-forces.

[15] Daniel Husek and Scott A. Natter, "Airborne next: *rethinking airborne organization and applying new concepts*" (Naval Postgraduate School, DSpace Repository, 2015), 34.

[16] RAND Arroyo Center, "Lighting over water*: Sharpening America's Light Forces for Rapid Reaction Missions"* (RAND Corp, 2000), 37.

continued use of aerial delivery is sufficient if GLoC are not established. New technology that provides GPS guided aerial delivery will permit supplies to be delivered with precision and off-set from enemy AD. As with most new technologies the cost for procurement lowers over time and becomes more readily affordable. Future precision parachutes could be designed to the point where automated systems are worn by soldiers. The system could assist with crash avoidance during opening and if integrated with the new soldier systems, could allow for automated steering to a pre-programed drop zone (DZ). Mobility is currently provided by ultra-light vehicles (UTVs) and have been trialed by the LiBs with great success. Inconjuction with the UTVs, UGVs or enhanced robotics should be acquired to assist with the movement of supplies and maintenance of parachuting equipment. With the addition of technology, airborne infantry units should build an eight man section vice the traditional ten men seen in mechanized units. At the company level a four platoon construct would allow for an integral support platoon that would be responsible for: controlling the unmanned systems, medium DF and IDF weapons and provide the robust communications connectivity to achieve ADO C2.

CONCLUSION

10. Force employment for airborne force is not a new paradigm. Many concepts are already articulated within our doctrine, Airborne Operations (2013); however a continued growth and exchange with other nations will define more concepts. Despite the broad and inclusive definition of airborne operations, most colloquial references, refer to the insertion of troops and equipment by parachute[17]. What airborne forces provide is a force that is capable of achieving strategic and rapid response. They also add a level of diversity within our Canadian Mechanized Brigades Groups (CMBGs) and providing the GoC with a range of land capabilities, potentially employed as the relief forces for SOF elements how are not mandated to hold ground.

> "The Army should retain a diversified force structure. The fact that the Army will have to operate across the spectrum of operations and in many different terrain types is in itself sufficient justification for this approach.[18]"

Airborne forces can operate within an ADO environment across the spectrum of conflict. They are not fixed to platforms, as outlined within the CA doctrine; specifically methods of infiltration can be conduct via fixed or rotary wing, parachute and will always be an inherently joint approach. These differentiated methods provide an adversary with an overwhelming problem set and challenges their ability to counter a specific threat tied to a specific area. One could view the terminology of Airborne in a negative manner based off a previous expeditionary incident. The CA should look to reinstate this nomenclature. We are a military that prides our self on our ethos and have proven over the years to be a true steward of the profession of arms. The term Airborne is universally recognizable and thus making it commonly understood by our allies.

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[17] Department of National Defence, B-GL-324-004/FP-001, *AIRBORNE OPERATIONS - PARACHUTE* (Ottawa: DND Canada 2013), 1-1-2.

[18] Wilson, Gordon IV and Johnson, "An Alternate Future Force: *Building a Better Army,"* Commonwealth Institute of Cambridge (Winter 2003-04): 31

RECOMMENDATION

11. Framing the discussion as lines of effort (LoE) lends itself well to growing a capability already inherent within the CA. The LoE sketched are mutually supporting and allow for concurrent development of capability, equipment and force generation of competencies. More inclusive operations within the Arctic from a combined joint perspective are required and transferrable to many operations we are conducting currently in Europe. To ensure we maintain a global reach, small unit exchanges with allied airborne forces should be sought out. This will further refine our employment concepts, increase understanding of potential emerging threats and continue to identify force development needs, notwithstanding the value of wings exchanges as a morale boost. A transition from mass drop to dispersed precision drop should be pursued. Systems need to be developed to continually build upon the emerging networks from command suites to the integrated soldier system. Furthermore, unmanned vehicles will assist with mobility of equipment and resources while assisting with targeting or early warning. With no vehicle crew, individual training to force generate airborne forces can hone their training towards skills for employing unmanned systems and be readily deployable in support of both collective training events and missions without a large logistical tail or requirement to ship significant tonnage as seen with armored vehicles.

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