

Canadian
Forces
College

Collège
des
Forces
Canadiennes



The Competing Interests of Employing SOF Versus Infantry in Today's Operational Environment

Major Talon Desjardins

JCSP 46 DL

Solo Flight

Disclaimer

Opinions expressed remain those of the author and do not represent Department of National Defence or Canadian Forces policy. This paper may not be used without written permission.

© 2021 Her Majesty the Queen in Right of Canada, as represented by the Minister of National Defence.

PCEMI 46 AD

Solo Flight

Avertissement

Les opinions exprimées n'engagent que leurs auteurs et ne reflètent aucunement des politiques du Ministère de la Défense nationale ou des Forces canadiennes. Ce papier ne peut être reproduit sans autorisation écrite.

© 2021 Sa Majesté la Reine du Chef du Canada, représentée par le ministre de la Défense nationale.

CANADIAN FORCES COLLEGE – COLLÈGE DES FORCES CANADIENNES

JCSP 46 DL – PCEMI 46 AD

2019 – 2021

SOLO FLIGHT

**THE COMPETING INTERESTS OF EMPLOYING SOF VERSUS INFANTRY IN
TODAY'S OPERATIONAL ENVIRONMENT**

By Major Talon Desjardins

“This paper was written by a candidate attending the Canadian Forces College in fulfilment of one of the requirements of the Course of Studies. The paper is a scholastic document, and thus contains facts and opinions which the author alone considered appropriate and correct for the subject. It does not necessarily reflect the policy or the opinion of any agency, including the Government of Canada and the Canadian Department of National Defence. This paper may not be released, quoted or copied, except with the express permission of the Canadian Department of National Defence.”

« La présente étude a été rédigée par un stagiaire du Collège des Forces canadiennes pour satisfaire à l'une des exigences du cours. L'étude est un document qui se rapporte au cours et contient donc des faits et des opinions que seul l'auteur considère appropriés et convenables au sujet. Elle ne reflète pas nécessairement la politique ou l'opinion d'un organisme quelconque, y compris le gouvernement du Canada et le ministère de la Défense nationale du Canada. Il est défendu de diffuser, de citer ou de reproduire cette étude sans la permission expresse du ministère de la Défense nationale. »

THE COMPETING INTERESTS OF EMPLOYING SOF VERSUS INFANTRY IN TODAY'S OPERATIONAL ENVIRONMENT

INTRODUCTION

The Canadian Infantry Corps (CIC) has been competing against the Canadian Special Operations Forces Command (CANSOFCOM) for resources over the last couple of decades. This competition has been further stressed by the evolving operational environment. These challenges are not isolated to Canada; other nations are experiencing similar challenges. As a result, a common debate has arisen that centres on the value of the infantry in the current and future operating environments, which has seen a compression in the operational level.

This paper's focus will be on examining the general trends in the operational environment from 2000 to roughly 2030, however historical comparisons may be made to highlight changes. The compression of the operational level in recent years has led to the insufficiency of the infantry's conception of the operational art and an exponential rise in the use of SOF.

Lieutenant-General Rouleau's, former commander of Canadian Joint Operations Command, memorandum on "How We Fight" clearly highlighted four key periods that the operating environment has transitioned through since 1984.¹ The last two periods are of key importance to this paper. First was the rise in none-state adversaries in the post-9/11 period. The other period was the increase of state-on-state aggressions as a means to

¹Michael Rouleau. "How We Fight - Commander CJOC's Thoughts." Memorandum from the Commander of Canadian Joint Operations Command. (10 February 2019). Accessed May 11, 2021.

shift the global power structure, beginning in 2014, which saw aggressions occurring below the accepted norm to warrant a response by either a state or an alliance.²

While non-state and state aggressors will remain at the forefront in the coming decade, the location of said operations will also continue to shift. Specifically, operations are shifting towards urban centres, space, and the cyber realm.³ These changes will force the CAF to re-examine how it operates and prioritizes capabilities. At a basic level, SOF affords a flexible and dynamic force that can rapidly deploy, and enable precise effects in an operational area. Conversely, the infantry can provide a medium weight force that can conduct prolonged operations, but in comparison it is slow to deploy.⁴ Both forces will be useful in urban operations, but the effects that they achieve will be very different.

Currently SOF and conventional infantry are competing for resources that are finite, especially considering the size of Canada's populace and the military. The most finite resource is the soldiers themselves, especially those of higher caliber. While the infantry can employ a more wide ranging group of soldiers, CANSOFCOM requires a specific caliber of soldiers to meet its requirements. The challenge is that as CANSOFCOM grows, it not only strips those soldiers from the infantry, but also strips potential SWAT members from the law enforcement agencies (LEAs).⁵ As a result,

²Rouleau. "How We Fight - Commander CJOC's Thoughts."

³Brian Weeden, and Victoria Samson. *Global Counterspace Capabilities: An Open Source Assessment*. Broomfield, CO: Secure World Foundation, 2020. Accessed May 10, 2021. https://swfound.org/media/206970/swf_counterspace2020_electronic_final.pdf; Michael N. Schmitt. "The Law of Cyber Targeting." *Naval War College Review* 68, Issue 2, (Spring 2015): 11-30. Accessed May 10, 2021. <http://cfc.idm.oclc.org/login?url=https://search-proquest-com.cfc.idm.oclc.org/scholarly-journals/law-cyber-targeting/docview/1660144943/se-2?accountid=9867>

⁴Douglas Russell. "Canadian Army Strategic Readiness - How Can We Improve," National Defence, Canadian Forces College, Joint Command and Staff Program serial 44, Toronto, Ont (2018): 5. Accessed March 8, 2021. <https://www.cfc.forces.gc.ca/259/290/405/192/russell.pdf>

⁵John B Alexander. "Convergence: Special Operations Forces and Civilian Law Enforcement," JSOU Report 10-6, Hurlburt Field, FL: Joint Special Operations University (2010): 77. Accessed March 18, 2021. https://www.afio.com/publications/JSOU10-6alexanderConvergence_final1.pdf

every agency is now competing for skilled personnel and the limited amount to go around hurts everyone.

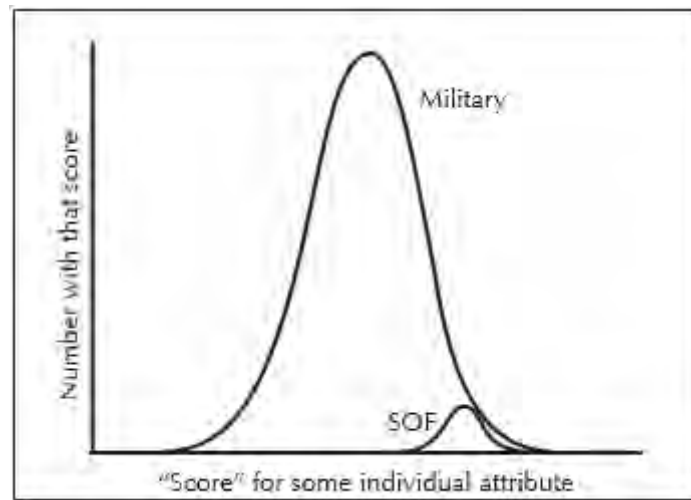


Figure 1 - "Schematic distribution of the values of a typical individual attribute for SOF and the entire military"

Source: Spulak, *A Theory of Special Operations: The Origins, Qualities, and Use of SOF*, 11.

The above figure highlights how those high caliber personnel are nested within the greater picture. It provides but a snapshot of the manpower limitation that the infantry and SOF face and the inherent risk in expanding certain capabilities.⁶

Equipping and funding military forces is a balancing act of managing risk. The common debate boils down to selecting capabilities that are better suited for conventional warfare, less likely but the greater threat, or equipment that better supports forces operating in a hybrid or irregular environment, highly probable but lower risk. An obvious example is the Tactical Assault Patrol Vehicle (TAPV), which offers greater protection in an irregular environment, but is not a vehicle that the CIC would like to

⁶Robert G. Spulak, Jr. "A Theory of Special Operations: The Origins, Qualities, and Use of SOF," JSOU Report 07-7, Hurlburt Field, FL: Joint Special Operations University (2007): 11. Accessed February 18, 2021. <https://apps.dtic.mil/dtic/tr/fulltext/u2/a495521.pdf>

operate in a conventional war. In fact, the infantry battalions did not even want the vehicle and had to get creative with its employment.⁷ Resourcing components is also impacted by the quantity of equipment that is required, or the degree of specialization that is required. Generally, the CIC requires greater quantities, whereas CANSOFCOM will require greater specialization and interoperability. Both, SOF and the Infantry, face their own unique challenges in procuring equipment and sourcing funding, as they try to enhance, replace, and adapt to operational requirements such as communications.⁸ These challenges are exacerbated when the needs of the other services are factored in, and other funding limitations impact priorities.

The final aspect to consider is the type of supporting resources that are required by the Infantry and SOF. Generally, the infantry requires less specialized support, but requires a greater degree of general support and a robust supply chain. While additional enablers are always welcomed, they are not generally necessary. In contrast, CANSOFCOM requires less support, as in quantity, to complete its mission. However, its support is typically specialized in nature and capability, such as dedicated air support, specialized insertion methods, and unique equipment to meet their mission sets.

The below framework will be focused on an examination of the operational environment. This will be followed by examinations of CANSOFCOM's and the CIC's employment. The paper will conclude with a final synthesis with a view to thread the overall picture together.

⁷Talon Desjardins. "Canadian Infantry Corps: Losing Operational Effectiveness?" (master's thesis, American Public University, 2019), 69.

⁸Ibid., 63.

OPERATIONAL ENVIRONMENT

The last 20 years have seen an operational environment that continues to evolve, as evident in Lieutenant-General Rouleau's memorandum.⁹ Today's environment is focused on hybrid warfare, or the grey space, with little peer versus peer operations occurring. In fact, it appears that peer versus peer conflicts are occurring in the grey space, vice in a direct manner or in public view. Prime examples are Russia's activities in the Crimea and in the Ukrainian Anti-Terrorist Operational Zone. The takeaway is that current peer versus peer operations are occurring under the threshold to warrant response from the international community.¹⁰ Looking forward it is likely that more conflicts will continue to occur in this grey area, especially as more conflicts are wage in the cyber and space domains, as well as urban environments. The cyber domain is unique as attacks and threats can come from anywhere in the world, whether state or non-state sponsored. A unique challenge is proving who launched the cyber-attack, and how to respond while selecting appropriate targets and minimizing collateral damage.¹¹ Activities in the space domain pose similar challenges, as many countries are focused on enhancing their individual capabilities and technology.¹² This would enable nations like Russia and China to increase their global power base.¹³ Conversely, urban centres offer a very different challenge for military forces. Operations in an urban environment, including

⁹Rouleau. "How We Fight - Commander CJOC's Thoughts."

¹⁰Phillip A. Karber. "Lessons Learned from the Russo-Ukrainian War: Personal Observations," The Potomac Foundation, Johns Hopkins Applied Physics Laboratory & U.S. Army Capability Center (2015):48-49. Accessed 27 February, 2021.

https://www.researchgate.net/publication/316122469_Karber_RUS-UKR_War_Lessons_Learned

¹¹Dorn, A. Walter. "Cyberpeacekeeping: New Ways to Prevent and Manage Cyberattacks." *International Journal of Cyber Warfare and Terrorism* 9, Issue 1 (January-March 2019): 19-20. Accessed May 5, 2021. at https://walterdorn.net/pdf/Cyberpeacekeeping-Prevent-and-Manage-Cyberattacks_Dorn-Webb_IJCWT_2019.pdf

¹²Weeden. *Global Counterspace Capabilities: An Open Source Assessment*.

¹³Karber. "Lessons Learned from the Russo-Ukrainian War: Personal Observations," 46.

mega cities, will likely be centered on security and stability tasks, but such tasks will require large force structures.¹⁴ Key challenges include complex lines of communications that afford flexibility in resupply and movement of opposing forces, and the increased likelihood of collateral damage. The two above domains and urban centers, will challenge planners and strategists inside the military and the government going forward.

Canada's latest defence policy, "Strong, Secure, Engage," addresses the space and cyber domains, highlighting their importance to Canada's security and engagement with the international community.¹⁵ If Canada's allies do not feel confident in its ability to operate in these domains, then Canada may see itself becoming excluded from critical partnerships. Also, enhancements in these domains will increase the situational awareness for military forces, especially from an intelligence preparation of the battlefield (IPB) perspective. This would dramatically increase force protection, precision strikes, and network definition. Success would move Canada closer to achieving its strategic goals as per the "Strong, Secure, Engage" defence policy, while increasing the CAF's overall effectiveness.¹⁶

OPERATIONAL ART AND OPERATIONAL LEVEL

Operational art and the operational level of war are pivotal to achieving success during campaigns, but while they share similarities their roles do in fact differ. To begin,

¹⁴David Betz, and Stanford-Tuck, Hugo. "The City is Neutral: On Urban Warfare in the 21st Century." *Texas National Security Review* 2, 4 (October 2019). Accessed March 25, 2021. <https://tnsr.org/2019/10/the-city-is-neutral-on-urban-warfare-in-the-21st-century/>

¹⁵Government of Canada. "Strong, Secure, Engaged," Ottawa, Department of National Defence (2017): 56-57. Accessed February 21, 2021. <http://dgpaapp.forces.gc.ca/en/canada-defence-policy/docs/canada-defence-policy-report.pdf>

¹⁶*Ibid.*, 89-93.

the operational level is what "links tactical action to strategic purpose."¹⁷ Commanders at this level manage the elements of time, space, means, and purpose. Commanders "use operational art to determine how, when, where, and for what purpose military forces will be employed, to influence the adversary's disposition before combat, to deter adversaries from supporting enemy activities, and to assure our multinational partners achieve operational and strategic objectives."¹⁸ In effect, the operational level is a toolbox that contains the tools, resources, and even the battle space. But how those tools are employed is operational art. The art comes from the mastery of knowing what tool to use, when to use it, and how much pressure can or should be applied in a given situation to get a desired effect.

The operational level of war is clearly important, as it joins low-level task to a higher purpose. However, over the last couple of decades the operational level has become compressed between the other two levels of war.¹⁹ This occurrence is a blurring of the lines between all levels and aspects that are commonly associated with the "Clausewitzian perspective" of warfare.²⁰ A large proponent of this compression is the speed at which information travels.²¹ Then combine that with an appetite where everyone

¹⁷Department of Defense. "Joint Operations," Joint Publication 3-0, 22 October 2018: I-13. Accessed May 13, 2021. https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp3_0ch1.pdf

¹⁸Ibid.

¹⁹Emilie Reitz & Reist, Jay & Fautua, David & Schatz, Sae & Stodd, Julian. "Strategic Compression and the Military's Pursuit of Cognitive Readiness." *Interservice/Industry Training, Simulation, and Education Conference (IITSEC)* (2016):10. Accessed May 18, 2021. https://www.researchgate.net/profile/Emilie-Reitz/publication/312083605_Strategic_Compression_and_the_Military's_Pursuit_of_Cognitive_Readiness/links/586e4e6908ae329d6213a193/Strategic-Compression-and-the-Militarys-Pursuit-of-Cognitive-Readiness.pdf

²⁰Reitz et al, "Strategic Compression and the Military's Pursuit of Cognitive Readiness." 3.

²¹Richard Andres. "Emerging Critical Information Technology and Great Power Competition." In *Strategic Assessment 2020: Into a New Era of Great Power Competition*, 141-143. Washington: Institute for National Strategic Studies, National Defense University. Accessed March 26, 2021. <https://ndupress.ndu.edu/Media/News/News-Article-View/Article/2404326/6-emerging-critical-information-technology-and-great-power-competition/>

instantly wants to know what is going on, from the local to worldwide audiences, which exacerbates the compression.²² Technological developments have also allowed commanders to get further into the "weeds" than ever before. This creates a new and ever expanding friction for the "well structured military institutions," which need to redevelop their methods to keep up with the changing tempo and closer relation between the strategic corporal and the tactical general.²³ The government and the military will also need to understand how that compression will impact force selection and force generation, as the CIC and CANSOFCOM have their unique strengths and limitations. The effects needed to be achieved during an operation will also play a pivotal role in selecting the appropriate forces. For instance, CANSOFCOM may be the better option to conduct a direct action in an urban centre to keep collateral damage down. On the other hand, the infantry would be better resourced to conduct more enduring stability and security operations.

CANSOFCOM

CANSOFCOM began with Joint Task Force 2 (JTF 2), which was when the CAF took over the counter-terrorist role from the Royal Canadian Mounted Police. At the time, JTF 2 was not meant to become a SOF capability. However, over the years, it matured and was formally developed into a special operations force. Then the Chief of Defence Staff, General Rick Hillier, formed CANSOFCOM in 2006.²⁴ CANSOFCOM

²²N.A. "Thoughts on 'Strategic Compression,'" Small Wars Journal, Blog (2007). Accessed April 12, 2021. <https://smallwarsjournal.com/blog/thoughts-on-strategic-compression>

²³Reitz et al, "Strategic Compression and the Military's Pursuit of Cognitive Readiness." 2.

²⁴Bernd Horn. "'We Will Find a Way': Understanding the Legacy of Canadian Special Operations Forces." *JSOU Report* 12-2 (February 2012): 1-2, and 37-39. Accessed May 9, 2021. https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwiQ2fnk5tTwAhW_B50JHaltAkYQFjAAegQIAhAD&url=https%3A%2F%2Fwww.hsd.org%2F%3Fview%26did%3D703696&usg=AOvVaw0T2j3nXZAYli0LhJFC6psK

conducted numerous operations around the world and in Afghanistan, where it, and its soldiers, gained international respect and built relations with the other SOF communities.

At its root, CANSOFCOM is a strategic asset that enables the Government of Canada “with a wide range of kinetic and non-kinetic options to pre-empt, disrupt, react to, or shape strategic or operational effects domestically or abroad.”²⁵ CANSOFCOM maintains a high readiness posture with a small footprint of skilled soldiers that can rapidly deploy anywhere in the world.²⁶ CANSOFCOM's characteristics allow it to effectively operate despite the compressing operational space. In fact, CANSOFCOM may be best suited compared to the other services due to its place as a strategic asset that operates at the tactical level. This allows CANSOFCOM to remain poised to achieve the operational priorities dictated to them by the government.

A key limitation that inherently exists with all SOF is its dependency on support. If SOF teams are not supported with combat enablers or combat forces their effectiveness will be limited, as will their ability to remain deployed. For example, CANSOFCOM relies heavily on resources and capabilities that support IPB.²⁷ CANSOFCOM can also be supported by combat forces to secure an area of operations so that SOF teams can conduct their actions on without losing assets to security tasks, and maintain their ability to react. Of course SOF is able to operate independently, but they can conduct much more complex and specific operations with the added enablers.²⁸ As the operational

²⁵D. Michael Day, and Bernd Horn. "Canadian Special Operations Command: The Maturation of a National Capability." *Canadian Military Journal* 10, no. 4 (Autumn 2010): 72. Accessed May 24, 2021.

<http://www.journal.forces.gc.ca/vol10/no4/doc/12-day%20horn-eng.pdf>

²⁶Bernd Horn, “The Strategic Utility of Special Operations Forces,” *Canadian Military Journal* 14, 4 (Autumn 2014): 70. Accessed May 10, 2021.

<http://www.journal.forces.gc.ca/vol14/no4/PDF/CMJ144Ep66.pdf>

²⁷Ibid.

²⁸Ibid.

environment is growing in complexity, the ability to task tailor forces going forward will be of vital importance. CANSOFCOM is already better poised to operate in the new environment and able to manage its activities in the compressed operational space. It is likely the most prepared element of the CAF to meet Canada's future needs.

CANADIAN INFANTRY CORPS

The CIC has a long and rich history in conducting missions that range across the spectrum of operations in its entirety. Most recently the CIC has conducted conventional and irregular operations, to include stability and training missions. The CIC has proven itself more than capable despite personnel and equipment shortages that date back to the end of the Cold War and Canada's Force Reduction Plan.²⁹ The CIC continues to offer skilled soldiers to deploy around the world in numerous types of operations to support the attainment of government goals. Maintenance of the CIC is important to the current Canadian deployment construct, as it remains the doctrinal cornerstone in Canada's approach. Recently, the Canadian Army updated its Managed Readiness Plan (MRP), which sees an army division conducting a rotating cycle of one year of road to high readiness, followed by two years of high readiness. The high readiness years are further broken down to the first year's focus being on international training and standby missions, and the second year is focused on supporting named missions. The change in the MRP was the result of not having sufficient forces available on short notice, which saw an increased dependency on CANSOFCOM by the government to address new requirements. Despite which version of the MRP was in use, the CIC's training allowed

²⁹Government of Canada. "Audit of Force Reduction Program," Ottawa, Department of National Defence, Chief Review Services, Director General Audit (1997): 4, 6, and 16. Accessed 8 May, 2021. <http://dgpapp.forces.gc.ca/en/canada-defence-policy/docs/canada-defence-policy-report.pdf>

its soldiers to remain flexible to address the evolving operational environment and the associated tasks.

Not unlike most infantry forces, the CIC requires continuous support via long lines of communications, but it can remain deployed for an extended period of time. It is therefore not surprising that a key limitation with the CIC is that it generally slower than SOF to build up forces in a new operational theatre. Of course, this is exacerbated when mechanized forces have to be deployed across the globe. Rapid deployments for the CIC is challenging in comparison to CANSOFCOM, as it is not often conducted nor is the CAF currently designed and resourced to easily facilitate such requirements.³⁰ Thus civilian systems are leveraged to address the CAF's deltas. Of particular advantage to the CIC is its reduced need for specialized support from the other services within the CAF. Again, the downside is the need for larger quantities of services to maintain the lines of communication and ensure that the infantry's equipment, especially vehicles, remain operational.

The issue of a compressing operational environment poses another significant challenge to the CIC during deployments and operations. The CIC still operates under a more traditional Clausewitzian approach to operations; despite efforts, change in this regard remains slow unlike the desire for more detailed information by all levels of command and government. Ironically, the need for information is increasing the burden on staff structures and often limiting their abilities to perform their functional requirements. This burden is exacerbated by the constant tempo that the CIC is under,

³⁰Russell. "Canadian Army Strategic Readiness - How Can We Improve," 5-7.

and their already limited time to achieve all necessary training and mandates.³¹ Units and headquarters are continuing to improve training and processes to minimize the burden, while still enabling detailed planning and operational control as the strategic corporal and tactical general continue to close in on each other.

THREADING IT TOGETHER

The above analysis highlighted the direction of the current and future operating environment will continue to be focused on non-state and state-on-state actors. Most likely, aggressions will occur under the threshold to warrant a formal response, which will reinforce the usage of the grey space of operations.³² Many such activities will also occur in the space and cyber domains, and in urban centres. Such activities will place a heavier burden on the operational level, and force commanders and staff to refine their operational art. Doing so will afford the ability to resist the friction posed by a compressed operational space and help to maintain a degree of separation between the strategic corporal and the tactical general.

Unlike the CIC, CANSOFCOM is better poised to adapt to the new challenges brought by the operational environment and its compression, while achieving the Government's strategic goals. It will continue to be constrained by its need of combat enablers and combat forces to assist in completing its missions. Conversely, the military and the government must examine what it wants the CIC to be able to achieve, and how

³¹Jesse Van Eijk. "Doing Too Much With Too Little, All of the time: The Effects of Tempo on Canadian Infantry Battalions," National Defence, Canadian Forces College, Joint Command and Staff Program serial 44, Toronto, Ont (2018): 56-57. Accessed February 12, 2021.
<https://www.cfc.forces.gc.ca/259/290/405/286/vaneijk.pdf>

³²Hans-Georg Ehrhart. "Postmodern Warfare and the Blurred Boundaries Between War and Peace." *Defense & Security Analysis* 33, no. 3 (July 2017): 265. Accessed 7 May 2021.
<http://cfc.idm.oclc.org/login?url=https://doi.org/10.1080/14751798.2017.1351156>

quickly. Such a review will ensure that the CIC can train its commanders and soldiers, staff the units appropriately, and ensure that resources are available to rapidly deploy across the globe while remaining supported. Otherwise, the CIC will be forced into operations where it is neither properly equipped nor trained. The historic role of the CIC remains relevant, both today and going forward, but it must be enabled to adjust from its current course to one that will allow it to better employ operational art within a compressed and complex environment.³³

CONCLUSION

The compression of the operational level in recent decades has led to the insufficiency of the infantry's conception of the operational art and an exponential rise in the use of SOF. The above examination was important to understand the institutional struggle between the SOF and the Infantry, so that a clearer delineation of tasks between the two elements can be achieved as the current situation is causing too much conflict and inhibiting preparation for the future battle space.

It is clear that the people and the Government of Canada have high expectations for its military. As such, it would behoove strategists and planners to identify the effect and factors that CANSOFCOM and the CIC must be able to achieve, as well as how quickly forces must be able to deploy. Once this is completed, the military should be resourced to ensure that it can deploy, sustain, and support operations. Having a mechanized force ready to fight, but have no way to send it across the globe will not be of any use. Conversely, having light forces may ensure a quick deploy; it does not ensure

³³Stephen Biddle. *Special Forces and the Future of Warfare: Will SOF Predominate in 2020?* Carlisle, PA: United States Army War College, Strategic Studies Institute, 24 May 2004: 20. https://indianstrategicknowledgeonline.com/web/special_forces.pdf

that they will have the combat power or support to conduct sustained operations. Both CANSOFCOM and the CIC have a purpose, but much work is needed to ensure that they can, and continue, meet Canada's needs.

BIBLIOGRAPHY

- Alexander, John B. "Convergence: Special Operations Forces and Civilian Law Enforcement," JSOU Report 10-6, Hurlburt Field, FL: Joint Special Operations University (2010). Accessed March 18, 2021. https://www.afio.com/publications/JSOU10-6alexanderConvergence_final1.pdf
- Andres, Richard. "Emerging Critical Information Technology and Great Power Competition." In *Strategic Assessment 2020: Into a New Era of Great Power Competition*, 139-151. Washington: Institute for National Strategic Studies, National Defense University. Accessed March 26, 2021. <https://ndupress.ndu.edu/Media/News/News-Article-View/Article/2404326/6-emerging-critical-information-technology-and-great-power-competition/>
- Berthiaume, Lee. "Special Forces Looks at Recruiting Off Street," *The Canadian Press* (2019). Accessed March 15, 2021. <https://www.msn.com/en-ca/news/canada/special-forces-looks-at-recruiting-off-street/ar-BBUsTo0?ocid=se>
- Betz, David, and Stanford-Tuck, Hugo. "The City is Neutral: On Urban Warfare in the 21st Century." *Texas National Security Review* 2, 4 (October 2019). Accessed March 25, 2021. <https://tnsr.org/2019/10/the-city-is-neutral-on-urban-warfare-in-the-21st-century/>
- Biddle, Stephen. *Special Forces and the Future of Warfare: Will SOF Predominate in 2020?* Carlisle, PA: United States Army War College, Strategic Studies Institute, 24 May 2004: 20. https://indianstrategicknowledgeonline.com/web/special_forces.pdf
- Chorley, J.A.H. "Beyond Institutional Icebergs: CANSOFCOM, Reflexivity and The Drive for Competitive Advantage," National Defence, Canadian Forces College, Joint Command and Staff Program serial 40, Toronto, Ont (2014). Accessed February 26, 2021. <https://www.cfc.forces.gc.ca/259/290/301/286/chorley.pdf>
- Clancy, James, and Chuck Crossett. "Measuring Effectiveness in Irregular Warfare." *Parameters* 37, no. 2 (Summer 2007): 88-100. Accessed March 10, 2021. <http://cfc.idm.oclc.org/login?url=https://search.proquest.com/docview/198030362?accountid=9867>
- Day, D. Michael, and Bernd Horn. "Canadian Special Operations Command: The Maturation of a National Capability." *Canadian Military Journal* 10, no. 4 (Autumn 2010): 69-74. Accessed May 24, 2021. <http://www.journal.forces.gc.ca/vol10/no4/doc/12-day%20horn-eng.pdf>
- Department of Defense. "Joint Operations," Joint Publication 3-0, 22 October 2018. Accessed May 13, 2021. https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp3_0ch1.pdf

Department of Defense. "Special Operations," Joint Publication 3-05, 16 July 2014. Accessed March 13, 2021. http://www.dtic.mil/doctrine/new_pubs/jp3_05.pdf

Department of Defense. "Joint Tactics, Techniques, and Procedures for Joint Special Operations Task Force Operations," Joint Publication 3-05.1, 19 December 2011. Accessed March 13, 2021. http://www.dtic.mil/doctrine/new_pubs/jointpub_operations.htm

Department of National Defence. "CAC 2018 Presentation," Ottawa, Department of National Defence, G3 Canadian Army. Last modified February 28, 2019. Accessed March 17, 2021. <http://acims.mil.ca/org/ArmyG3/CAC/Documents/21090225-CA-CAC-27-28-Feb-19-Master.pptx>

Desjardins, Talon. "Canadian Infantry Corps: Losing Operational Effectiveness?" Master's thesis, American Public University, 2019.

Dorn, A. Walter. "Cyberpeacekeeping: New Ways to Prevent and Manage Cyberattacks." *International Journal of Cyber Warfare and Terrorism* 9, Issue 1 (January-March 2019): 19-30. Accessed May 5, 2021. at https://walterdorn.net/pdf/Cyberpeacekeeping-Prevent-and-Manage-Cyberattacks_Dorn-Webb_IJCWT_2019.pdf

Dunn, J., K. Ford, and S. Flemming. "PERSTEMPO Qualitative Data: CF Member Focus Group Findings," Department of National Defence, Canada, Operational Research Division, Directorate of Strategic Human Resources, ORD Technical Report TR 2005/09, February 2005. Accessed March 20, 2021. https://www.cfmws.com/en/AboutUs/MFS/FamilyResearch/Documents/DGPRA_M/PERSTEMPO%20and%20deployment/PERSTEMPO_Data_Findings.pdf

Egan, Edward P. "Field Marshal William J. Slim: The Great General and The Breaking of The Glass Ceiling," U.S. Army War College, Carlisle Barracks, Pennsylvania (1993). Accessed February 19, 2021. <https://apps.dtic.mil/dtic/tr/fulltext/u2/a263934.pdf>

Ehrhart, Hans-Georg. "Postmodern Warfare and the Blurred Boundaries Between War and Peace." *Defense & Security Analysis* 33, no. 3 (July 2017): 263-275. Accessed 7 May 2021. <http://cfc.idm.oclc.org/login?url=https://doi.org/10.1080/14751798.2017.1351156>

Giegerich, Bastian. "Hybrid Warfare and the Changing Character of Conflict." *Connections: The Quarterly Journal* 15, no. 2 (Spring 2016): 65-72. Accessed March 10, 2021. <http://cfc.idm.oclc.org/login?url=https://search-proquest-com.cfc.idm.oclc.org/docview/1784582252?accountid=9867>

- Gorka, Sebastien L.V. "The Age of Irregular Warfare: So What?" *Joint Force Quarterly* 58 (3rd Quarter 2010): 32-38. Accessed March 10, 2021.
<http://cfc.idm.oclc.org/login?url=https://search.proquest.com/docview/527715996?accountid=9867>
- Government of Canada. "Audit of Force Reduction Program," Ottawa, Department of National Defence, Chief Review Services, Director General Audit (1997). Accessed 8 May, 2021. <http://dgpaapp.forces.gc.ca/en/canada-defence-policy/docs/canada-defence-policy-report.pdf>
- Government of Canada. "Canadian Forces Joint Publication 01: Canadian Military Doctrine," Ottawa, Department of National Defence, Joint Doctrine Branch, Canadian Forces Experimentation Centre (April 2009). Accessed February 28, 2021. http://publications.gc.ca/collections/collection_2010/forces/D2-252-2009-eng.pdf
- Government of Canada. "Land Operations 2021 Adaptive Dispersed Operations: The Force Employment Concept for Canada's Army of Tomorrow," Ottawa, Department of National Defence (2007). Accessed March 7, 2021.
http://publications.gc.ca/collections/collection_2009/forces/D2-188-2007E.pdf
- Government of Canada. "Strong, Secure, Engaged," Ottawa, Department of National Defence (2017). Accessed February 21, 2021.
<http://dgpaapp.forces.gc.ca/en/canada-defence-policy/docs/canada-defence-policy-report.pdf>
- Henriksen, Thomas H. "The Israeli Approach to Irregular Warfare and Implications for the United States," JSOU Report 07-3, Hurlburt Field, FL: Joint Special Operations University (2007). Accessed February 18, 2021.
<https://apps.dtic.mil/dtic/tr/fulltext/u2/a495467.pdf>
- Horn, Bernd, "The Strategic Utility of Special Operations Forces," *Canadian Military Journal* 14, 4 (Autumn 2014): 66-70. Accessed May 10, 2021.
<http://www.journal.forces.gc.ca/vol14/no4/PDF/CMJ144Ep66.pdf>
- Horn, Bernd. "'We Will Find a Way': Understanding the Legacy of Canadian Special Operations Forces." *JSOU Report* 12-2 (February 2012): 82 p. Accessed May 9, 2021.
https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwiQ2fnk5tTwAhW_B50JHaItAkYQFjAAegQIAhAD&url=https%3A%2F%2Fwww.hsdl.org%2F%3Fview%26did%3D703696&usg=AOvVaw0T2j3nXZAYli0LhJFC6psK
- Hutchens, Michael E., et al. "Joint Concept for Access and Maneuver in the Global Commons: A New Joint Operational Concept." *Joint Force Quarterly*, no. 84 (1st Quarter 2017): 134-139. Accessed March 11, 2021.

<http://cfc.idm.oclc.org/login?url=https://search.proquest.com/docview/1867155922?accountid=9867>

Jeppson, Christian, et al. "NATO's Approach to Irregular Warfare Protecting the Achilles' Heel." *Military Review* 95, no. 5 (September-October 2015): 27-39. Accessed March 10, 2021. <http://cfc.idm.oclc.org/login?url=https://search.proquest.com/docview/1709827491?accountid=9867>

Karber, Phillip A. "Lessons Learned from the Russo-Ukrainian War: Personal Observations," The Potomac Foundation, Johns Hopkins Applied Physics Laboratory & U.S. Army Capability Center (2015). Accessed 27 February, 2021. https://www.researchgate.net/publication/316122469_Karber_RUS-UKR_War_Lessons_Learned

Kiras, James. "Modern Irregular Warfare: Afghanistan and Iraq." *In The Practice of Strategy: From Alexander the Great to the Present*, edited by John A. Olsen and Colin S. Gray, 260-286. Oxford: Oxford Scholarship Online, 2012. Accessed March 15, 2021. <https://oxford-universitypressscholarship-com.cfc.idm.oclc.org/view/10.1093/acprof:oso/9780199608638.001.0001/acprof-9780199608638-chapter-13>

McInnis, Kathleen J. "Lessons in Coalition Warfare: Past, Present and Implications for the Future." *International Politics Reviews* 1, no. 2 (Dec 2013): 78-90. Accessed March 18, 2021. <http://cfc.idm.oclc.org/login?url=https://doi.org/10.1057/ipr.2013.8>

Monaghan, Sean. "Countering Hybrid Warfare: So What for the Future Joint Force?" *Prism* 8, no. 2 (4 October 2019): 95-103. Accessed March 10, 2021. <http://cfc.idm.oclc.org/login?url=https://search.proquest.com/docview/2317561710?accountid=9867>

Nye, Joseph. "Get Smart: Combining Hard and Soft Power." *Foreign Affairs* 88, no. 4 (2009): 160-163. Accessed March 12, 2021. <http://web.b.ebscohost.com/cfc.idm.oclc.org/ehost/detail/detail?vid=0&sid=011f1590-416f-4e77-a55b-01b517666913%40pdc-v-sessmgr03&bdata=JnNpdGU9ZWwhvc3QtG12ZSZzY29wZT1zaXRl#AN=42120095&db=rkh>

Nye, Joseph. "Power and Foreign Policy." *Journal of Political Power* 4, no. 1 (April 2011): 177-192. Accessed March 12, 2021. <https://www-tandfonline-com.cfc.idm.oclc.org/doi/full/10.1080/2158379X.2011.555960>

O'Steen, Thomas W. "Adapting to the Evolving Strategic Environment: Applying the Lessons of the Global War on Terror to Future Threats." *Harvard International Review* 37, no. 4 (Summer 2016): 34-38. Accessed March 10, 2021.

<http://cfc.idm.oclc.org/login?url=https://search.proquest.com/docview/1914193572?accountid=9867>

Pelleriti, John A., et al. "The Insufficiency of U.S. Irregular Warfare Doctrine." *Joint Force Quarterly* 93 (2nd Quarter 2019): 104-110. Accessed March 10, 2021. <http://cfc.idm.oclc.org/login?url=https://search.proquest.com/docview/2229615233?accountid=9867>

Reitz, Emilie & Reist, Jay & Fautua, David & Schatz, Sae & Stodd, Julian. "Strategic Compression and the Military's Pursuit of Cognitive Readiness." *Interservice/Industry Training, Simulation, and Education Conference (IITSEC)* (2016). Accessed May 18, 2021. https://www.researchgate.net/profile/Emilie-Reitz/publication/312083605_Strategic_Compression_and_the_Military's_Pursuit_of_Cognitive_Readiness/links/586e4e6908ae329d6213a193/Strategic-Compression-and-the-Militarys-Pursuit-of-Cognitive-Readiness.pdf

Rouleau, Michael. "How We Fight - Commander CJOC's Thoughts." Memorandum from the Commander of Canadian Joint Operations Command. (10 February 2019). Accessed May 11, 2021.

Russell, Douglas. "Canadian Army Strategic Readiness - How Can We Improve," National Defence, Canadian Forces College, Joint Command and Staff Program serial 44, Toronto, Ont (2018). Accessed March 8, 2021. <https://www.cfc.forces.gc.ca/259/290/405/192/russell.pdf>

Slim, Sir William. "Defeat into Victory," London, United Kingdom: Cassell and Company (1956).

Schmitt, Michael N. "The Law of Cyber Targeting." *Naval War College Review* 68, Issue 2, (Spring 2015): 11-30. Accessed May 10, 2021. <http://cfc.idm.oclc.org/login?url=https://search-proquest-com.cfc.idm.oclc.org/scholarly-journals/law-cyber-targeting/docview/1660144943/se-2?accountid=9867>

Spulak, Robert G., Jr. "A Theory of Special Operations: The Origins, Qualities, and Use of SOF," JSOU Report 07-7, Hurlburt Field, FL: Joint Special Operations University (2007). Accessed February 18, 2021. <https://apps.dtic.mil/dtic/tr/fulltext/u2/a495521.pdf>

Spulak, Robert G., Jr. "Innovate or Die: Innovation and Technology for Special Operations," JSOU Report 10-7, Hurlburt Field, FL: Joint Special Operations University (2010). Accessed February 17, 2021. <https://apps.dtic.mil/dtic/tr/fulltext/u2/a535701.pdf>

Van Eijk, Jesse. "Doing Too Much With Too Little, All of the time: The Effects of Tempo on Canadian Infantry Battalions," National Defence, Canadian Forces

College, Joint Command and Staff Program serial 44, Toronto, Ont (2018).
Accessed February 12, 2021.
<https://www.cfc.forces.gc.ca/259/290/405/286/vaneijk.pdf>

Weeden, Brian, and Victoria Samson. *Global Counterspace Capabilities: An Open Source Assessment*. Broomfield, CO: Secure World Foundation, 2020. Accessed May 10, 2021.
https://swfound.org/media/206970/swf_counterspace2020_electronic_final.pdf

Wither, James K. "Making Sense of Hybrid Warfare." *Connections: The Quarterly Journal* 15, no. 2 (2016): 73-87. Accessed March 12, 2021.
<http://cfc.idm.oclc.org/login?url=https://search.proquest.com/docview/1784582336?accountid=9867>