CANADIAN MILITARY JOURNAL

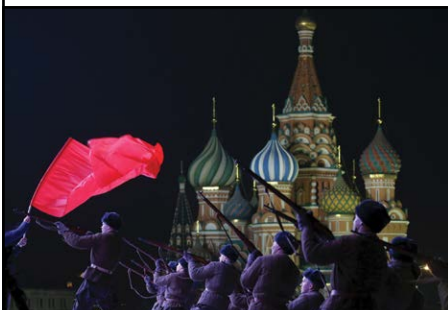National Defence
Défense nationale

Canada

CONTENTS

Cover
The distinguished signature member of the Canadian Society of Marine Artists Marc Magee's stunning historical tribute to Canada's first submarines, pictured here off the south coast of Vancouver Island. Captioned, *"CC1 and CC2, the first Canadian subs in 1914, when they were at Trial Island to finalize the transfer from the Electric Boat Company in Seattle on the morning that war was declared."*
Marc Magee/Canadian Society of Marine Artists

Canada, the Freeloader, Rather Than Vested Defence Partner in NORAD and the Defence of North America

Russia's Private Military Contractors: Cause for Worry?

CMJ

The Lockheed CP-140M *Aurora*, Canada's Current Long Range Patrol Fleet

Making Moral Decisions Under Stress: A Revised Model for Defence

Counterinsurgency and Hybrid Warfare in Vietnam

CANADIAN MILITARY JOURNAL

NOTE TO READERS

As a bilingual journal, readers should take note that where citations are translated from their original language, the abbreviation [TOQ] at the end of the note, which stands for "translation of original quote", indicates to the readers that the original citation can be found in the published version of the Journal in the other official language.

EDITOR'S CORNER

A heartfelt welcome to the Spring 2021 edition of the *Canadian Military Journal,* and this is now the fourth consecutive edition of our flagship DND/CAF quarterly to be produced, primarily out of the home. Boy, time sure flies when one is in a pandemic lockdown, but I have to admit, this is beginning to get a tad tedious, or 'a bit of a bother,' as my British friends would say… Nonetheless, there now seems to be 'light at the end of the tunnel,' with vaccines starting to be delivered in significant numbers. However, the onus is still on all of us to honour and practice the oft-repeated precautions, wearing of masks, hand washing, and social distancing if we are going to triumph over this terrible blight.

Well, as the saying goes, "Hope springs eternal," and as I draft these words for the preface to the spring edition, it is 20 January, and Joseph R. Biden has just been inaugurated as the 46th President of the United States. His acceptance speech was a soothing balm of dedicated purpose, reason, selfless commitment, and a plea for unity, healing, and mutual respect throughout the land. We at the Journal wish our cherished American friends and neighbours the very best of luck in implementing these noble and refreshing goals.

As tends to be the case, lots of variety this time out… Taking the point, Lieutenant-Colonel Andrew Wood, the Canada-US plans desk officer on the Strategic Joint Staff, suggests that in spite of Canada's repeated commitment to the North American Aerospace Defence Command (NORAD), "…a lack of political willingness, a diverted focus in favour of overseas operations, and a failure to invest in the capabilities required to maintain NORAD as a credible defence, has resulted in the Command's falling behind in its effectiveness to carry out its assigned missions." Wood then contends that a further Canadian political commitment to the US-Canada relationship, coupled with policy and capability investments, is required to modernise the Command, and "…is urgently needed to restore the relevance of NORAD and render it an effective deterrence."

Next, Dr. Sergey Sukhankin, a Research Fellow at the Jamestown Foundation, as well as being a security expert and a previous contributor to the CMJ, along with his colleague, Alla Hurska, an Associate Fellow with the International Centre for Policy Studies (Kyiv), and an Analyst at the Jamestown Foundation delve into the murky world of Russia's private military contractors (PMCs). In essence, they believe that "…Although they are effective as a tool against weaker opponents, we argue that Russian PMCs should not be viewed as a strategic element in Russia's military toolkit. Indeed, they are effective only when paired with Russia's regular armed forces."

Moving right along, Lieutenant-Colonel Bernie Thorne, an Air Combat Systems Officer with over 32 years of Regular Force service in the Maritime Air domain, and now a reservist helping to field the newest updates to the CP-140M *Aurora* long range patrol aircraft, brings us up to date with all the innovative changes that have been brought to fruition for this venerable and distinguished Maritime (and beyond) aerial asset.

For a change of direction, a consortium of defence scientists and personnel behavioural specialists, namely Deanna Messervey, Waylon Dean, Elizabeth Nelson and Jennifer Peach, explore ethical decision-making by military members under stressful operational circumstances and conditions. To that end, they have tabled a revision to the established Defence Moral Decision-Making (DMDM) model, which incorporated recent findings on "… decision-making under stress, on the role of emotions and 'heat of the moment' thinking, and on the influence of situational factors." However, the authors were quick to *qualify* and *clarify* their stated purpose from the original DMDM, specifically, "… is not to prescribe ethical or moral behaviour – i.e., to show military personnel how to solve moral dilemmas – but to describe the moral decision-making process and the factors that can affect it in order to develop training and education to counteract these ethical risk factors."

In the last of our major articles, military intelligence analyst Ismaël Fournier, who specializes in strategy and tactics related to insurgencies and counterinsurgencies, takes us back to the past with a stimulating and informative review of American (and Allied) tactics, (both conventional and counterinsurgency), employed against the insurgent and conventional forces of the North during the Vietnam War. "This article goes against the classic views regarding the US military's 'poor performance' in Vietnam, and suggests that US counterinsurgency initiatives were highly effective in the area, and went so far as to cause an unequivocal defeat of the Communist insurgency. It will be further suggested that the execution of conventional military operations was in fact essential if US and South Vietnamese forces hoped to preserve the Republic of Vietnam."

Only one opinion piece this time out, but it is a very timely consideration of a highly relevant topic. Master Warrant Officer Tim Stackhouse, the Company Sergeant Major for Medical Company, 1 Field Ambulance, contends that in order to modernize and embrace a new generation of the soldier, specific units and sub-units (as well as 'top down' guidance) must also lead the change with respect to mentoring and motivating millennials and post-millennials.

Our esteemed resident commentator, Martin Shadwick, is taking a brief medical furlough this time out, but he will be back in force for the summer issue.

Finally, we close with four book reviews on very different subjects, which we recommend for consideration by our readers.

Until the next time.

David L. Bashow
Editor-in-Chief
Canadian Military Journal

LETTERS TO THE EDITOR

Sir,

I found Daniel Gosselin's article on Civil-Military Relations (Vol. 20, No. 4, Autumn 2020) as interesting as his previous work on the subject. It is a varied and somewhat complex subject but, in the end, one hopes that both the deputy minister (DM) and the chief of defence staff (CDS) combine to give the strongest possible professional (including military) advice to the government, if not in tandem, at least not in direct competition with one another.

It is inevitable that one or the other will stray from his/her lane from time to time. Much depends on personalities. Will the CDS accept advice from the DM on promotions and appointments of senior military officers with whom the DM works, for example? Or vice versa regarding senior civilians?

Protocols that allow the CDS direct access to the Minister and to the Prime Minister if necessary have long been in place. The DM will see

CANADIAN MILITARY JOURNAL

Vol. 20, No. 4, Autumn 2020

National Defence / Défense nationale

Canada

the minster frequently, the PM less so. In my view, the diarchy that prevails in NDHQ today allows blended advice to issue from the department/Canadian Armed Forces to the minister. Advice is not a zero sum game and nor is advice mutually exclusive. This is not to deny the CDS an opportunity to offer specific 'military advice' as he deems necessary.

One anecdote might be of interest to readers regarding the Gosselin mention of the reorganisation of Defence following the report of the Independent Management Review Group in 1972. Initially there were two uniformed deputy chiefs of defence staff appointed, one for operations and one for support. In the face of a call for increased civilian representation and in direct response to the then-CDS' (Jacques Dextraze) demand to have a general as ADM Personnel, the military position of DCDS (Support) was suppressed in favour of creating ADM Materiel, a position that exists to this day.

Yours sincerely,
David B. Collins
Former Canadian High
Commissioner to Pakistan
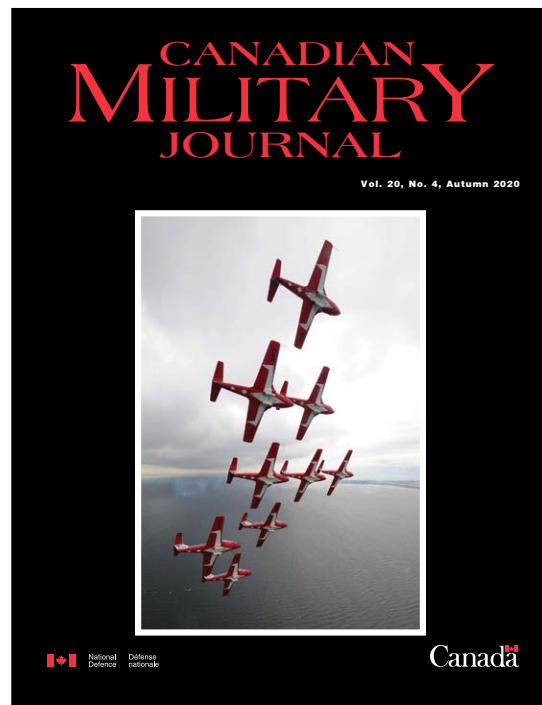
Sir,

I would like to commend yourself and the author, Major Dan Doran, on the excellent article "Sacrificing Culture in the Name of Strategy: Why Militia Armouries Matter" in the Autumn 2020 issue. There is unfortunately a bit of a gaffe in it, which perhaps only people living out this way would notice. The Hastings and Prince Edward Regiment—with companies today in Belleville, Peterborough, and Cobourg—has not had a presence in the armoury in Picton, Ontario, since 1965, when the building was declared surplus. The photo on page 68 shows the armoury after a recent thoroughgoing renovation; clearly visible are the names of some of the many commercial tenants occupying space in the building. Also housing artists' workshops and a gym, the space is a stunningly imaginative reconstruction that will no doubt continue to be useful to a far broader range of the local population than was possible when it belonged to the military. Although well beyond the scope of Major Doran's article, the "afterlife," if you will, of the Picton armoury demonstrates beautifully how surplus Militia armouries continue to contribute to the country that built them.

Brian Bertosa
Cobourg, Ontario
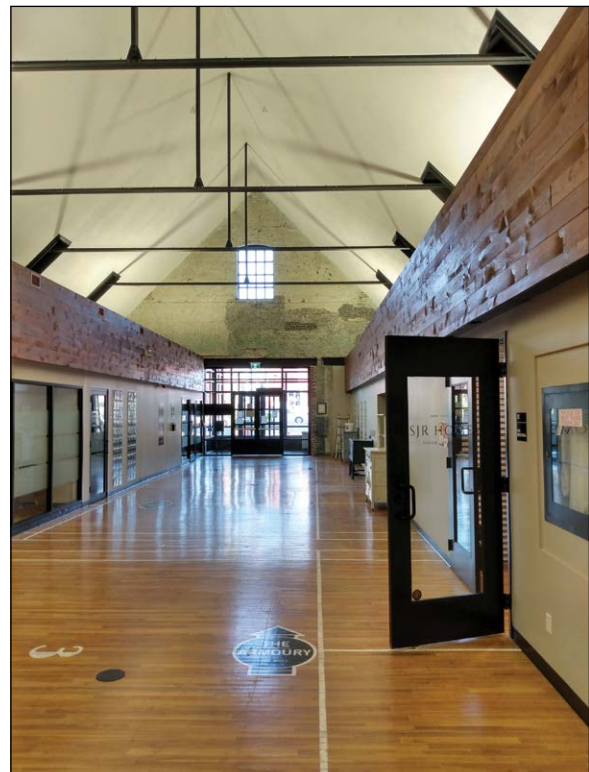
Brian Bertosa

The interior of the former Hastings and Prince Edward Regiment armoury in Picton, Ontario.

DND photo/National Defence Image Library
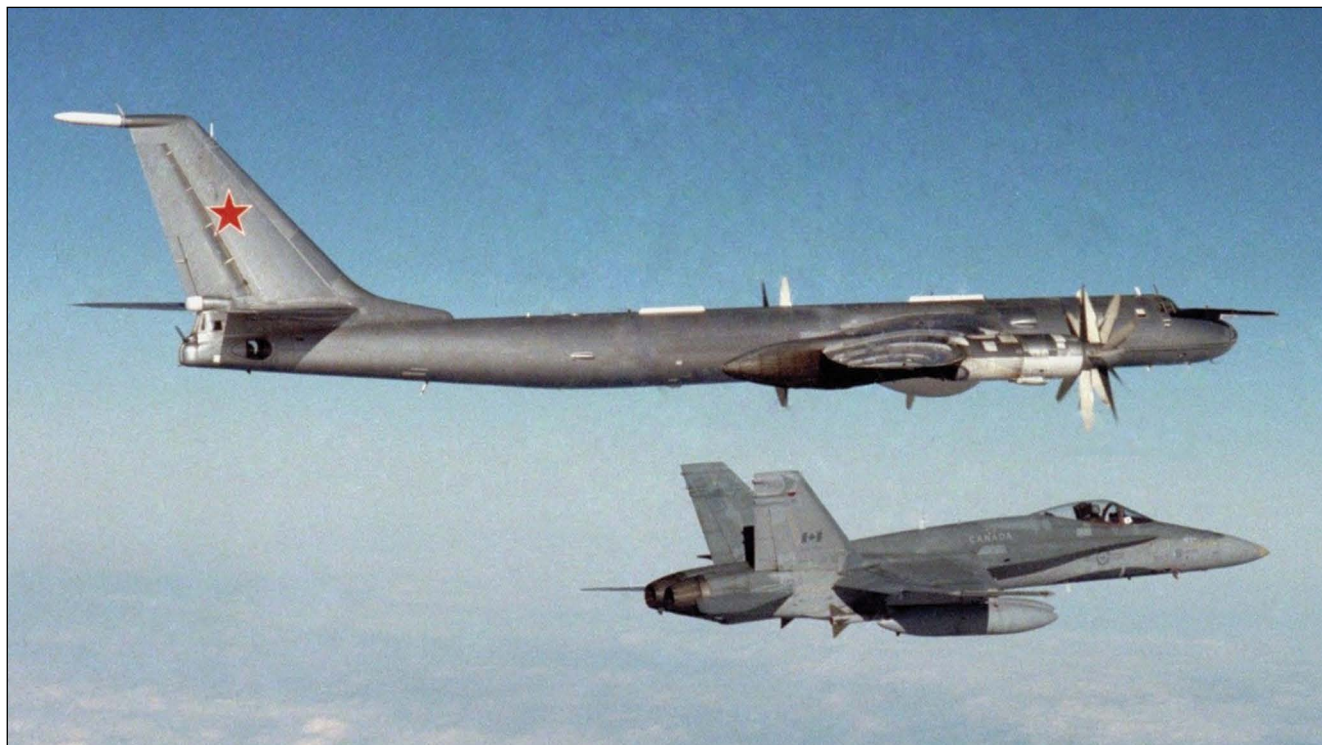
A Canadian CF-18 *Horne*t intercepts a Russian Tu-95 *Bear* long-range bomber.

Canada, the Freeloader, Rather Than Vested Defence Partner in NORAD and the Defence of North America

by Andrew Wood

Lieutenant-Colonel Andrew Wood *is an artillery officer having served in the British Army for 20 years, including on operations in Northern Ireland and Iraq, as well as on exchange in Army Doctrine before transferring to the Canadian Army in 2012. Currently serving in 1st Canadian Division HQ; he previously served on the Strategic Joint Staff as the Canada-US plans desk officer involving a myriad of NORAD related issues. This article was developed for submission as part of the Joint Command and Staff Programme.*

Introduction

The North American Aerospace Defence Command (NORAD) is often framed as the benchmark in the Canada-United States (U.S.) relationship, which celebrated its 60th anniversary in May 2018. It is charged with defending North America in the Air and Maritime domains.[1] The Cold-War origins of the relationship benefited both parties and traded space for capability and protection. Yet, despite Canada's repeated commitment to NORAD and the defence of North America,[2] a lack of political willingness, a diverted focus in favour of overseas operations, and a failure to invest in the capabilities required to maintain NORAD as a credible defence, has resulted in the Command's falling behind in its effectiveness to carry out its assigned missions, failure to respond to, and lacking the capabilities required to respond to current and evolving threats to North America.

This article contends that a political commitment to the Canada-US relationship, combined with the policy and capability investments required to modernise NORAD, is urgently needed to restore the relevance of NORAD and render it an effective deterrence. These factors are, however, unlikely to be considered, due to the short-term political vision of Canadian politics, the unwillingness to commit the required funds to re-balance the capability relationship, and the belief that the U.S. will ultimately guarantee Canada's security. Canada, while considering itself equal, has always been the junior partner in an unequal relationship, and as the threats and organisation have evolved, that gap has widened.

The article will also briefly examine the mutually beneficial circumstances that led to the creation of NORAD, and for 30 years of its life, provided an effective defence of North America. It will then examine some contributory factors in the decline of its relative value and lost opportunities degrading deterrent effect, resulting in a flawed Canadian assessment of its own relevance and the utility of NORAD. Linked to this assertion, it will also examine the corresponding decline in its relevance to the U.S.,

and offer an opinion as to whether this is, in fact, due to Canadian neglect or other factors. The article will constrain itself to the extant NORAD Mission set and not venture into additional domains that are addressed through the Tri-Command sponsored Evolution of North American Defence (EvoNAD)[3] study.

Historical Perspective

North America has the advantageous position of facing potential threats at standoff distances. Separated from potential aggressors by the Atlantic, Pacific and Arctic Oceans, Canada and the U.S. share an unparalleled defence relationship forged by a shared geography, common values/ interests, deep historical connections, and highly integrated economies. These factors inevitably elevate the task of defending North America to the strategic level. Equally important has been the commitment to work together to defend North America, initially through the joint commitment of the Ogdensburg Declaration in 1940,[4] and since 1957/1958,[5] through the Bi-National NORAD command.

> **"North America has the advantageous position of facing potential threats at standoff distances."**

and threats faced by Canada and the United States. Its missions expanded in the 1960s to ballistic missile early warning with the emergence of intercontinental (ICBM) and submarine launched (SLBM) ballistic missiles. Subsequently, post 9/11, it assumed an asymmetric mission set, consisting of Operation *Noble Eagle One* to intercept and interdict civil aircraft with potentially nefarious intentions, and to the war on drugs, with its Aerospace Control Mission and a Maritime Warning Mission.[6]

The evolution of NORAD manifested itself in the Americans not wanting Canada to be a liability in its defence against Soviet aggression, and the recognition that Canada was incapable of defending itself.[7] The U.S. therefore, identified the need for cooperation with Canada to acquire territory and airspace in order to provide strategic depth against potential Soviet targets.[8] This led initially to the construction of the Pine Tree Line Radar warning installations, followed shortly afterwards by the Distant Early Warning (DEW) line radar-warning system.[9] Concerns over Canadian sovereignty were addressed in terms of Canadian inclusion in site selection, and the application of Canadian legal status and title.[10] Cooperation at the military level led to the development of protocols for the cross-border interception and control of aircraft.[11] These protocols were subsequently accepted at the political levels of both governments, resulting in the NORAD agreement with its corresponding checks and balances,[12] to become responsible to both nations for the shared defence of North America.

The NORAD Agreement, most recently renewed in 2006,[13] deliberately highlights the enduring nature of the bi-national relationship. However, the passing of 40 years since the last significant series of investments exposes the neglect both governments have placed upon continental defence, despite the rhetoric[14] embodied in subsequent

Prime Minister William Lyon Mackenzie King and President Franklin D. Roosevelt at Ogdensburg in 1940.

The Cold-War Soviet nuclear threat, initially through manned bombers, led to the combined military conclusion that defence would be most effectively and efficiently met through a shared command and control structure. Based upon this conclusion, NORAD was founded in 1957, centred upon the shared interests

defence policies and national military strategies. Other factors have contributed to this neglect, namely, the end of the Cold War and a subsequent shift from continental defence, to expeditionary operations, and the historical belief that the defence of North America is best achieved far away from national territory.[15]

DND/National Defence Image Library/PCN70-87

Close up of a radar antenna with the dome in the background. This DEW Line site is located at Cambridge Bay in the Arctic.

power conflict subsided, to be replaced by primarily-American led or supported Western military interventions. This resulted in a shift in direction towards expeditionary deployments to address post-Soviet Union security impacts, such as those experienced in Bosnia and Kosovo.

The second factor was 9/11, which represented a NORAD failure through, neither predicting, nor being able to respond to the events of that day.

"*We found that NORAD, which had been given the responsibility for defending U.S. airspace, had construed that mission to focus on threats coming from outside America's borders. It did not adjust its focus even though the intelligence community had gathered intelligence on the possibility that terrorists might turn to hijacking and might even use planes as missiles.*"[17]

This did lead to the creation of Operation *Noble Eagle* mission to address the asymmetric (terrorist) threat under NORAD auspices, and subsequently, the creation of United States Northern Command (USNORTHCOM) to inwardly address homeland defence missions.

NORAD is often described as the benchmark of the Canada-United States relationship, and yet it largely exists 'beneath the political radar,' successfully operating in the military domain, out of sight and out of mind. As such, there are few motivating factors for either government to concentrate efforts on North American Defence.

"*NORAD today is largely out of sight and out of mind, best known as the organization that "tracks Santa.*"[16]

These initiatives and shared perspectives set the scene for the bi-national relationship, and provide the reference point as to how NORAD has diverged from its founding intent.

Catalyst for Change

Three factors served as a catalyst for change with respect to NORAD's focus. First was the ending of the Cold War, which viewed the marginalisation of the continental defence mission as the threat of great

17 Wing Publishing Winnipeg

Figure 1: The vastness of Canada's Arctic is graphically driven home through this overlay of Europe upon the region.

The final catalyst factor for change is the re-directed international focus, following the events of 9/11, towards global counter-terrorism operations, initially in Afghanistan and subsequently Iraq. In the absence of any superpower threat following the end of the Cold War, attention and resources were diverted overseas, to the detriment of the homeland defence mission. Domestically, the creation of USNORTHCOM resulted in an inwardly orientated, all domain command; in and of itself contributing to the creation of Canada Command (CANCOM).[18] The subsequent decision by Canada to not participate in the proposed US ballistic missile defence system[19] strained the political relationship, and forced USNORTHCOM and United States Strategic Command (USSTRATCOM) to adopt the ballistic missile mission set. This decision marginalized NORAD and the extant mission set, challenging its continued relevance.

Geo-Strategic Context

The Westphalian notion of sovereignty has become the foundation of the modern nation state. The challenge for Canada remains the maintenance of sovereign control over its diverse and expansive geography.[20] The ability to maintain domain awareness and the ability to exercise sovereign control would be hugely taxing for Canada alone, yet outsourcing to the U.S. to provide this on our nation's behalf erodes Canada's sovereignty. Therein lies the paradox that the government faces, and the environment in which NORAD exists.

"…no alternative to NORAD which would not involve a substantial reduction in military effectiveness…"[21]

As the threats to North America have evolved, the American reliance upon Canada to defeat them has diminished, and hence, a gap has opened up. Space-based capabilities enable the U.S. to act independently, leaving Canada woefully short of the capabilities required to address them alone. As such, Canada needs to make substantive efforts to make NORAD relevant to the United States.

It is important to note what NORAD has provided to Canada, especially, ready access to the huge U.S. military capability and investment structure. These capabilities have consistently made up for Canadian shortfalls, such as Generation Five Lockheed *Raptor* F-22 fighters, the Airborne Warning and Control System (AWACS) and air-to-air refuelling platforms, and these

> **"It is important to note what NORAD has provided to Canada, especially, ready access to the huge U.S. military capability and investment structure."**

Peter Horree/Alamy Stock Photo/F3C7W4

Treaty of Münster, 1648, preliminary of the Peace of Westphalia, which ended the Thirty Years War.

DND/National Defence Image Library/PCP85-7

Another shot of a Russian Tu-95 *Bear* being intercepted by an earlier Canadian fighter-interceptor, this time, a CF-101 *Voodoo* out of CFB Bagotville, Quebec.

investments have largely been at U.S. expense. Furthermore, the increased ability to exercise control over Northern airspace has enabled Canadian sovereignty.[22] Being a Combatant Command[23] (COCOM), NORAD enabled Canada to have unique access to both the strategic viewpoint of the United States, and its seemingly-limitless intelligence and decision making network, providing Canada a more influential global position than might be *expected* or *deserved*.[24] Furthermore, bi-national cost sharing has avoided duplication and promoted the efficient and effective use of resources for each country.[25] The financial costs are such that Canada would not have been able to meet them with its significantly smaller defence budget.

Decades of Under-Investment

NORAD last underwent a major a modernization in the 1980s as part of the North American Air Defence Modernization (NAADM) memorandum of understanding (MoU). This, along with other minor projects, resulted in the building of the North Warning System (NWS), a set of short- and long-range radars linking Alaska to Greenland, across Canada's North. It also led to the construction of Forward Operating Locations[26] (FOLs) in Northern Canada, the integration of Canadian Air Force (CAF) personnel into the US AWACS program, and the purchase of CF-18 *Hornets* for the CAF, which is now the Royal Canadian Air Force (RCAF).[27] These initiatives significantly enhanced Canada's and NORAD's ability to detect, operate and intercept the threats presented by the Soviet Union.

Since then, the threat environment has evolved significantly, in part resulting in the introduction of the maritime warning mission, and the asymmetric mission exercised through Operation *Noble Eagle*. However, RCAF capabilities and force structure supporting the NORAD mission have remained relatively unchanged. This has contributed to NORAD's decreasing ability to keep pace with the changing strategic environment and evolving threats. Given the return of great power competition, particularly with regard to Russia and China, increased capabilities of these potential adversaries, and limited capacity due to aging infrastructure, there is an overwhelming requirement to re-modernize NORAD to ensure that it has the equipment, resources and force structures needed to effectively conduct its missions.

The threats of today are not those faced in the 1980s. Manned Soviet long-range bombers were required to fly over the northern-most areas of North America in order to launch missiles against targets to the south. Submarines of the 1980s had limited abilities to operate in the Arctic and were addressed largely in the maritime domain.[28] The extant NWS acted as a 'trip-wire' against aerial attack, and provided the command and control for air interception in the Canadian Air Defence Identification Zone (CADIZ). The CADIZ represented the limit-of-range of the NWS radar coverage, but astonishingly, it did not cover the full sovereign territory of Canada's Arctic Archipelago. The addition of the FOLs provided the ability to base fighters to intercept manned bombers within the CADIZ, and the CF-18s themselves were capable against a likely Soviet *Bear*[29] threat.

Figure 2: The Canadian North Warning System Radar Site laydown.

After nearly 40 years, the Russian long-range aviation (LRA) incursions have become more frequent and adventurous in nature as a result of Russia's emerging assertiveness.[30] Advances in technology, including stand-off cruise missiles,[31] which no longer require the overflight of North America to range their targets, combined with stealth technologies, enable the air and submarine launched cruise missiles to remain undetected by NWS radars. Blended with an emerging Chinese threat, intermixed with rogue state (North Korea and Iran) and non-state actors, we see a situation whereby the threat has outpaced the capabilities that were designed to counter the threats, eroding the defence credibility of Canada in the eyes of the United States, and with it, the deterrent effect of NORAD.

Political Malaise

Both countries have traditionally valued the priority of defending North America overseas,[32] far away from national territories. Correspondingly, the level of political interests and understanding in NORAD has waxed and waned over the years, from PM Diefenbaker's lack of understanding over the command's role in the Cuban Missile Crisis,[33] to PM Pearson's 1964 *White Paper on Defence,* which, despite reaffirming the commitment to collective security, focused national priorities upon international peacekeeping.

"NORAD has to an extent benefitted from the lack of political attention to date... and political oblivion is easily managed. There is, however, the great risk that too little attention will lead to NORAD's marginalisation, especially in terms of resource commitments."[34]

Another example of malaise can be found in the 1986 NAADM Agreement, which saw the development of the NWS to replace the DEW and Pine Tree Line surveillance systems. Despite a 50:50 split in construction costs, the agreement generated a 60:40 split[35] in operations and maintenance costs,[36] which provided clear gains to Canada with significant enhanced capabilities. This was shortly followed by the Canadian refusal to join the U.S. Ballistic Missile Defence (BMD) programme, despite an American desire to base interceptors in Canada, ignored NORAD's missile warning role within the integrated tactical warning/ attack assessment (ITW/AA) system. This demonstrates the relative lack of political understanding of the role NORAD fulfils in multi-domain North American Defence.

> **"Additionally, Canada's financial commitment to defence has steadily declined."**

While the key concerns of the U.S. have been around security, those of Canada have been around its junior partner status' and of balancing the sovereignty issue with the realities of "securing security." Additionally, Canada's financial commitment to defence has steadily declined.[37] However, the threats to North America

have changed, and the U.S. has been able to address much of this change independently, widening the gap between the two countries and further diminishing Canada's roles within NORAD. The stand-up of USNORTHCOM[38] in 2002 is an example of the Americans taking more independent responsibility for homeland defence, thus marginalizing Canada in the process. That said, the political rhetoric has been unchanged since its formation, most recently articulated in the 2017 joint statement by President Trump and PM Trudeau:

> "*The North American Aerospace Defense Command (NORAD) illustrates the strength of our mutual commitment. United States and Canadian forces jointly conduct aerospace warning, aerospace control, and maritime warning in defence of North America. We will work to modernize and broaden our NORAD partnership in these key domains, as well as in cyber and space.*"[39]

This demonstrates that politically NORAD is a great soundbite to benchmark the CAN-US relationship, despite the misalignment with military reality.

Defence Policy

Repeated defence policies from the 1964 *White Paper on Defence,* to the *Canada First Defence Strategy* (CFDS)[40] have consistently committed to strong North American defence and the unique partnership arrangement with the United States, which is exemplified by the bi-national NORAD agreement.

> "*Only the U.S. has the military capabilities necessary to defend North America's geographic expanses and that Canada would maintain its existing security relationship with the U.S.*"[41]

The most recent defence policy, *Strong Secure Engaged*[42] is no different. Dr. Kim Nossal articulates this as being "old wine in new skins,"[43] indicating that little has really changed over time:

> "*Canada's new defence policy announced by the Liberal government of Justin Trudeau in June 2017—entitled Strong, Secure, Engaged (SSE)—is indeed a case of "old wine" (an established and largely unchanging Canadian defence policy) in a "new bottle" (a new defence policy statement).*"[44]

The latest Defence Policy, *SSE*, emphasised being Strong at Home and Secure in North America. Within that, it announced significant investments and outlined a strong focus on the defence of Canada and North America. Most notably was the commitment to modernise NORAD,[45] which was hailed as the unwritten and unfunded chapter of SSE. Yet, over two years since its launch, there is no follow-on chapter, nor is there currently any plan to modernize NORAD. There were significant commitments, such as the pledge to replace the CF-18s with 88 advanced fighters.[46] However, the difficult decision with respect to which fighter would actually replace the CF-18 was pushed into a new electoral mandate, and the interim fighter purchase of 25 Ex-RAAF F-18s[47] adds no realistic capability over the existing aging CF-18s, unless it is for a pool of spare parts.[48] The expansion of the CADIZ[49] was a mere line on a map, aligning Canadian airspace with the Exclusive Economic Zone (EEZ). It was accompanied with no increased capability to sense, or to control the full extent of the Arctic Archipelago.

The area in red (Figure 3) represents the expanded zone, with the previous line highlighted as the Canada ADIZ, which represents the limit of range of the current NWS. The policy highlights plans to replace the NWS with a 'system-of-systems.'[50] This will not be fielded until at least 2035, leaving a 15-year capability gap. The project to replace the aging CC-150 *Polaris* air-to-air tanker transport capability[51] envisages a 'like-for-like' replacement, yet falls short of assigning any replacement to the NORAD mission, and fails to mention the NORAD assigned CC-130T[52] based out of Winnipeg, which represents the sole RCAF NORAD tanker commitment at
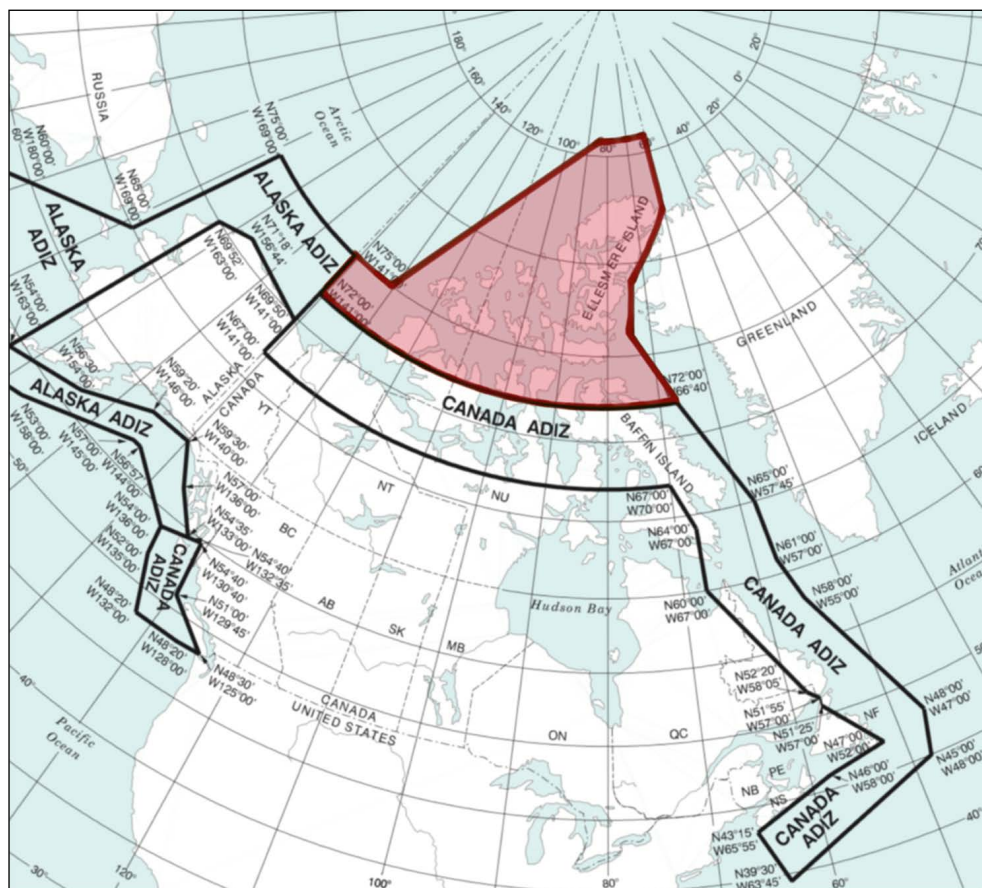
Figure 3: The expanded Canadian Air Defence Identification Zone (CADIZ).

this time.[53] The Ground Based Air Defence (GBAD) investment[54] is configured for army expeditionary deployments, such as the Enhanced Forward Presence (eFP)[55] battlegroup in Latvia, and is defined as being very short range air defence (VSHORAD.)[56] As such it will not provide a domestic capability that could support an event, such as the G8 summit or the Olympics, nor would it support the NORAD forward operating locations against the types of threats that they would now likely face. These examples demonstrate the reality of the political and policy malaise. The reality translates into a Canadian practice of delayed decisions and short term stop gap acquisitions that suit political mandates and further the erosion of Canada's credibility with the United States.

Conclusion

Politically, Canada has traditionally prioritized its CAN-US relationship more in terms of economics, the current NAFTA/ USMCA dynamic being such an example. Furthermore, the view that a dollar spent on defence is a dollar not spent on social programs, education or infrastructure development, leads to the marginalization of defence in Canadian politics to an extent that it is not in U.S. politics. Given the current rhetoric emerging from the present U.S. administration,[57] Canada can no longer depend upon the U.S. to bear the 'lion's share' of the financial burden for the shared defence of North America. Despite successive governments traditionally showing little appetite to shoulder the huge financial burden of North American defence, current and future government's need to be prepared to invest a higher priority in defence spending, particularly in support of large-scale projects, such as the NWS replacement and high Arctic basing.

> **"The article has attempted to demonstrate that while NORAD has historically evolved to meet emerging threats, the last significant investment was with the NAADM agreement in the 1980s."**

This article has explored the founding conditions of NORAD and the evolving nature of the Bi-National Command; the underpinning of mutually shared interests, and the offset of capability for space against a shared threat dynamic. It focused upon Canada's benefit from the deal involving the trading of space for protection and assurance, as well as the associated compromises with regard to sovereignty. The article has attempted to demonstrate that while NORAD has historically evolved to meet emerging threats, the last significant investment was with the NAADM agreement in the 1980s. Since then, investment and capabilities have atrophied. This has largely been due to changed focuses towards the war on terrorism and expeditionary operations, in and of themselves reflecting broader historical defence policy trends.

The requirement for renewed focus and investment is clear, SSE provided the impetus, but it has so far failed to deliver the required capabilities that will retain NORAD's relevance into the future. Limited space available in this article prevents a detailed investigation of capabilities and investments required to rebalance. However, it is clear that failure to modernize with a sense of immediacy will render the bi-national command irrelevant. Subsequently, Canada will no longer be the beneficiary of this mutually beneficial arrangement, as the U.S. will likely embark upon unilateral solutions to assure their homeland defence, in all probability at the expense of Canadian sovereignty, which would be to our detriment. Canada has a small, and closing, window of opportunity to demonstrate that it is a vested defence partner in NORAD and the defence of North America *alongside* the United States, as opposed to being the freeloader.

CMJ

NOTES

1   NORAD's three mission are Aerospace Command, Aerospace Control and since 2006, Maritime Warning.

2   Emphasised in repeated defence policies, including the Canada First Defence Strategy and the latest published defence policy, "*Strong, Secure, Engaged.*"

3   EvoNAD is an all-domain study being conducted by the Tri-Command (CJOC, NORAD and USNORTHCOM) into all domain threats to North America. It reports its findings to the Permanent Joint Board on Defence (PJBD).

4   Which led to the establishment of the PJBD, followed by the CAN-US Military Cooperation Committee (MCC).

5   Militarily established in 1957, but not politically ratified until 1958.

6   It assumed the Maritime Warning Mission in 2006 with the re-signing of the NORAD Agreement in perpetuity.

7   J Jockel, *Canada in NORAD, 1957 – 2007: A History*. McGill-Queens University Press, 2007, pp. 9-11.

8   *Ibid*, pp. 1-3.

9   At US expense.

10   J Jockel, *No Boundaries Upstairs: Canada, the United States and the origins of North American Air Defence*. Vancouver: University of British Columbia Press, 1987, p. 83.

11   Recognising sovereign rules of engagement. *Ibid*, p.54-55.

12   Namely that the commander and deputy commander would be approved by, and from, both nations. *Ibid*, p. 58.

13   At which time it was signed in perpetuity by the Canadian and U.S. Governments.

14   K Nossal, *New Wineskin, Old Wine: The Future of Canadian Contributions to North American Security*, North American Strategic Defense in the 21st Century, Springer Publishing, 2018, pp. 97-107, at: https://link.springer.com/chapter/10.1007/978-3-319-90978-3_8

15   A Charron and J Fergusson, *Beyond NORAD and Modernization to North American Defence Evolution*. Canadian Global Affairs Institute, May 2017, pp. 1-3.

16   A Charron *et al*, *NORAD: Beyond Modernisation*, University of Manitoba. January 2019, p. 6.

17   The 9/11 Commission Report, *Final Report of the National Commission on Terrorists Attacks Upon the United States* (Washington, DC: 2004), p. 427.

18   The mission sets are now incorporated into Canadian Joint Operations Command (CJOC), with both domestic and expeditionary focus.

19   In 2004, Canada and the US had agreed to assign the early warning component of missile defence to NORAD. The decision by PM Martin in 2005 not to participate in BMD was a surprise to the US. J Fergusson, *Shall we Dance? The Missile Defence Decision, NORAD renewal, and the future of Canada-US defence Relations,* in Canadian Military Journal, Vol. 6, No. 2 (2005), pp. 12-15.

20 Bordering three oceans, the world's second largest landmass, a low population density and the world's longest undefended border.

21 J Jockel, *Canada in NORAD, 1957 – 2007: A History*. McGill-Queens University Press, 2007, p. 76.

22 *Ibid,* pp. 12-15.

23 Though its dual USNORTHCOM role.

24 Eluding to Canada's "middle power status" as defined by Nils Brvik in D. Barry and D. Bratt. *Defence against Help: explaining Canada-US Security Relations*. In American Review of Canadian Studies 38. No1, 2008, p. 64.

25 A Charron and J Fergusson. *NORAD in Perpetuity? Challenges and Opportunities for Canada*. University of Manitoba, 2014, p.9.

26 Located in Iqaluit, Inuvik, Yellow Knife and Rankin Inlet.

27 Themselves replacing CF-101 *Voodoos* and CF-104 *Starfighters*.

28 A Charron and J Fergusson, *NORAD in Perpetuity*. University of Manitoba, 2014, pp.36-38.

29 Tupolev 95/142 Aircraft.

30 NORAD has tracked an increase in LRA activity since 2007.

31 Kh-101 (with a range of up to 4500km) recently demonstrated in Syria, and the nuclear capable Kh-102 cruise missile.

32 A Charron, *NORAD: Beyond Modernization.* University of Manitoba.2019, pp. 11-12.

33 J Jockel, Canada in NORAD, 1957 – 2007: A History. McGill-Queens University Press, 2007, pp. 54-58.

34 A Charron, *NORAD: Beyond Modernization*, University of Manitoba. 2019, p. 59.

35 The 60% share being borne by the US.

36 Despite 11 of 15 Long-Range Radars and 36 of 30 Short-Range Radars being located in Canada.

37 A Charron, *NORAD: Beyond Modernization*, University of Manitoba, 2019, p. 15.

38 The BMD role is resident in US Northern Command (USNORTHCOM).

39 Joint Statement from President Trump and Prime Minister Trudeau on 13 February 2017. Accessed: https://pm.gc.ca/eng/news/2017/02/13/joint-statement-president-donald-j-trump-and-prime-minister-justin-trudeau

40 Canada. Department of National Defence. Canada First Defence Strategy, 2008. Accessed: https://www.canada.ca/content/dam/dnd-mdn/migration/assets/FORCES_Internet/docs/en/about/CFDS-SDCD-eng.pdf

41 1992 Defence White Paper (Mulroney).

42 Canada, Department of National Defence, *Strong Secure Engaged Canada's Defence Policy*. 2017. Accessed: http://dgpaapp.forces.gc.ca/en/canada-defence-policy/docs/canada-defence-policy-report.pdf

43 K, Nossal, *New Wineskin, Old Wine: The Future of Canadian Contributions to North American Security*, North American Strategic Defense in the 21st Century, Springer Publishing, 2018, pp.97-107. Accessed: https://link.springer.com/chapter/10.1007/978-3-319-90978-3_8

44 *Ibid*, pp. 98-99.

45 SSE initiative 111, Modernize NORAD to meet existing challenges and evolving threats to North America, taking into account the full range of threats.

46 SSE initiative 44. Replace the CF-18 fleet with 88 advanced fighter aircraft to improve Canadian Armed Forces air control and air attack capability

47 Purchase of interim fighters. Accessed: https://nationalpost.com/news/canada/deal-to-buy-used-australian-fighter-jets-finalized-with-canadian-forces-set-to-be-flying-them-by-summer

48 Utility of interim fighter purchase. Accessed: https://www.macdonaldlaurier.ca/mlis-shimooka-available-comment-scathing-ag-report-ailing-rcaf/

49 SSE initiative 107. Align the Canadian Air Defence Identification Zone (CADIZ) with our sovereign airspace.

50 SSE initiative 109. Collaborate with the United States on the development of new technologies to improve Arctic surveillance and control, including the renewal of the North Warning System.

51 SSE initiative 47. Recapitalize next generation strategic air-to-air tanker-transport capability (CC-150 Polaris replacement).

52 CC-130T H Model Hercules Aircraft based out of Winnipeg on 24 hours' notice-to-move

53 The CC-130T goes out of service in 2020, with the STTC Polaris replacement not due in service until at least 2028, leaving the RCAF and NORAD solely reliant upon the US, which in peacetime provides KC-135 aircraft (configured specifically to support the RCAF mission with hose and drogue vice probe) from the air National Guard based in Spokane, WA and Bangor, ME.

54 SSE initiative 34. Acquire ground-based air defence systems and associated munitions capable of protecting all land-based force elements from enemy airborne weapons

55 Enhanced Forward Presence.

56 Very Short Range Air Defence.

57 Trump rhetoric on allied burden-sharing. Accessed: https://www.brookings.edu/blog/order-from-chaos/2018/07/11/what-trump-gets-wrong-on-allied-burden-sharing/

NORAD nostalgia… A flight of four Avro CF-100 *Canuck* fighter interceptors overfly a radar site near RCAF Station Cold Lake, Alberta, circa the early-1960s.

DND/CFJIC photo PC-3107 by Flying Officer Sankey
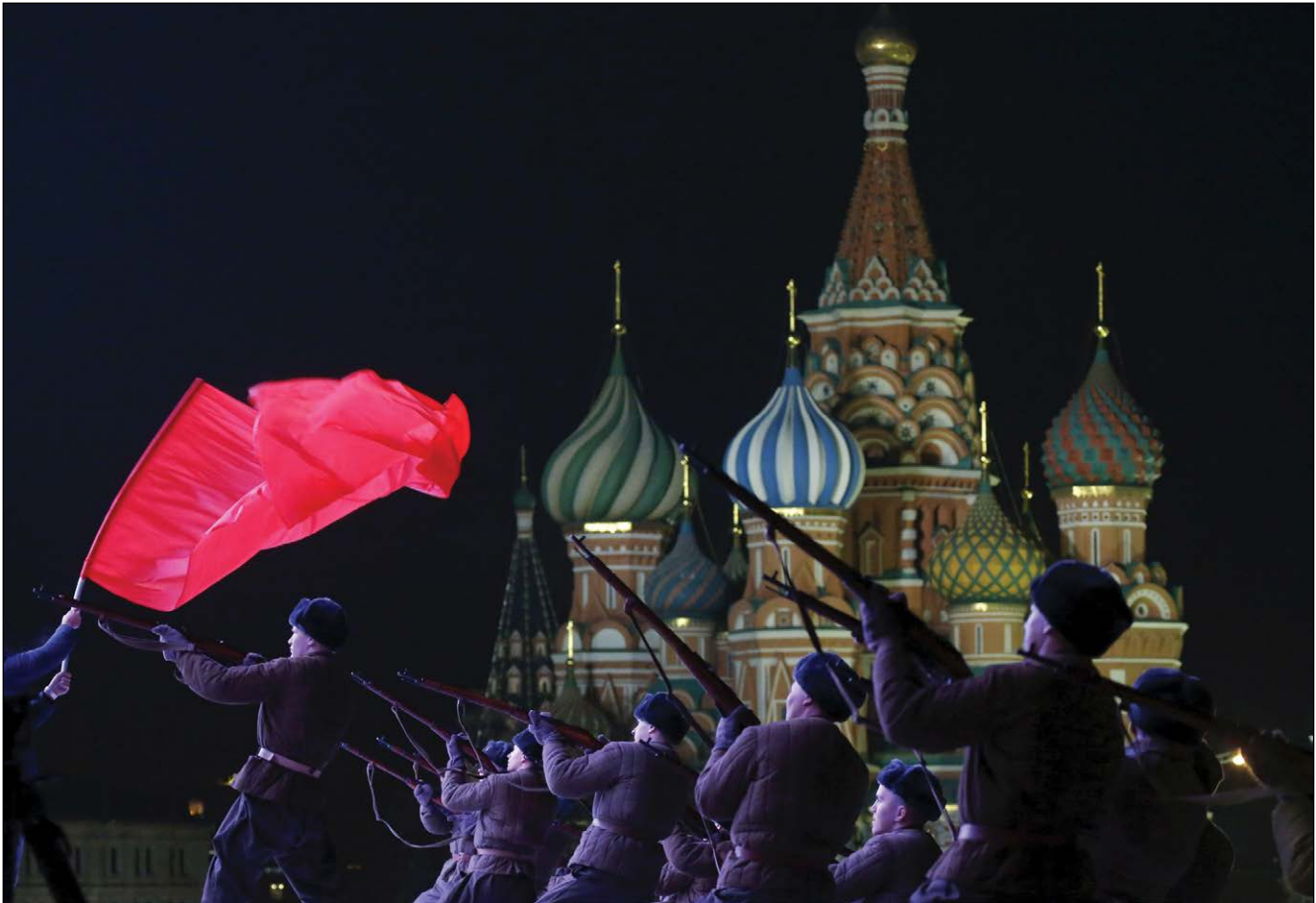
Russian servicemen, dressed in historical uniforms, take part in a military parade rehearsal in front of St. Basil's Cathedral at Red Square in central Moscow, 6 November 2015.

Russia's Private Military Contractors: Cause for Worry?[1]

by Sergey Sukhankin and Alla Hurska

Dr. Sergey Sukhankin *is a Research Fellow in the Jamestown Foundation, and an Advisor with Gulf State Analytics, both located in Washington, D.C. He also teaches at the MacEwan School of Business in Edmonton. Sergey has consulted with various high-profile bodies and agencies, including the DIA (Washington), CSIS and the DND (Ottawa), and the European Parliament in Brussels.*

Alla Hurska *is an Associate Fellow with the International Centre for Policy Studies (Kyiv), and an Analyst in the Jamestown Foundation in Washington, and she is pursuing her Masters degree at the University of Alberta in Edmonton. Her areas of interest include Russian and Chinese policies in the Arctic region, non-linear forms of warfare, disinformation, Ukrainian foreign and security policy, and the geopolitics of oil.*

Russian soldiers, on armoured vehicles, patrol a street in Aleppo, Syria, 2 February 2017.

Introduction

Two major geopolitical shifts – the Syrian civil war and the Ukrainian conflict – drew attention of the global academic and policy-related community to the issue of Russia's private military companies (PMCs) and the so-called Wagner Group, which has become the living symbol of Russia's covert use of 'shady' militarized groups in a powerplay against the west and its allies as well as securing Russia's geo-economic/strategic interests abroad.

Although they are effective as a tool against weaker opponents, we argue that Russian PMCs should not be viewed as a strategic element in Russia's military toolkit. Indeed, they are effective only when paired with Russia's regular armed forces. We contend that PMCs are unlikely to be used against NATO members directly. Nevertheless, Russia will continue employing these forces in zones of instability as a means to engage the West in non-linear and asymmetric fashion.

Russian PMCs throughout History

Russia's reliance upon non-state actors dates back to the second half of the 16th Century.[2] In general, in Tsarist Russia, militarized irregular formations, primarily Cossacks, were employed by the state for various (para)military tasks, including ensuring physical safety of the Russian monarch and, using contemporary parlance, confronting "hybrid threats."[3] Russian irregulars played a visible role in all major regional conflicts waged by the Tsarist regime, frequently acting as proto-special forces that were partly tasked with protection of the Russian national border in the areas populated by the non-Russian peoples. In the course of the Russian Civil War (1917–1922), both sides of the conflict also actively relied upon and collaborated with various forms of irregular formations and armed groups.[4]

During the Soviet period (1922–1990), the state primarily used irregulars in pursuit of its geopolitical objectives. Specifically, in its confrontation with the western powers in the Third World, that is, Africa, Asia, and Latin America, the Soviets would use "military instructors" – active military[5] sent to 'friendly countries' to assist local armed forces in training, yet on many occasions directly participating in combat.[6] The Soviet state acted as both contractor and provider of these services, whereas pecuniary motives were almost completely overshadowed by ideological calculations.[7] However, in the 1980s, this trend experienced a certain transformation: in Libya, the Soviet military instructors and advisors started to be used by the government of Muamar Gaddafi in his adventurous "border wars."[8] Upon the dissolution of the USSR, many of them chose to remain in Libya and serve Gaddafi,[9] de-facto becoming the first Russian private military contractors in Africa.

Armed men, believed to be Russian servicemen march near a Ukrainian military base in the village of Perevalnoye, outside Simferopol, 5 March 2014.

Russian servicemen keep position in the administrative border between Daghestan in Chechnya, 25 May 2000.

A second set of groups comprises 'private armies' organized in the 1990s as a result of an expanding Russian criminal web.[15] To gain military experience, their members took part in some regional conflicts, including Chechnya, where they fought "on both sides of the barricades."[16] Within this sub-group, special attention should be allocated to Roman Tsepov, the owner of a security firm named "Baltik-Eskort" (1992). The firm – which began as an idea of Viktor Zolotov, the current Director of the National Guard of Russia and a member of the Security Council – was tightly connected to some of Russia's most powerful organized criminal groups (the Tambov Gang), and rendered security services to the family of (then) St. Petersburg Mayor Anatoly Sobchak, and also for his deputy at the time, Vladimir Putin.[17] Later, "private armies" were disbanded with some of its members and leaders being either killed or moved to private security companies (PSCs).

The collapse of the Soviet Union in 1991 dealt a severe blow to state institutions and Russian society. An abrupt and ill-planned transition to a market economy destroyed or badly damaged key governmental structures. Two of the main 'victims' were the security services and the armed forces. Chronically underfinanced and occasionally humiliated by the new regime,[10] this branch of the Russian state started to lose some of its most qualified cadre to various 'business' (de-facto semi-criminal) structures.[11] Thus, the roots of Russia's current PMCs industry should be acknowledged within this historical epoch (1991–2003). However, it would not be adequate to refer to a single source. Instead, we propose to take a look at the following three (intertwined) groups.

The first group consists of 'volunteers' who had participated in conflicts throughout the post-communist period in places such as South Ossetia and Abkhazia, Transnistria, Tajikistan, Chechnya, and the Balkans (Bosnia).[12] As noted by a distinguished Russian military officer, Igor Girkin/ Strelkov, a participant in hostilities in Bosnia himself,[13] many "volunteers" were drawn to these "gray zones" for "résumé building": to later join either Western PMCs or the private security structures.[14]

> **"A second set of groups comprises 'private armies' organized in the 1990s as a result of an expanding Russian criminal web."**

Viktor Zolotov, head of the Russian Federal National Guard Service, makes remarks at the unveiling of a monument to Russian National Guard officers killed in the line of duty at Pobedy Square, Ryazan, Russia, 8 November 2019.

A third group consists indeed of those PSCs. The most well-known players on the Russian market were Antiterror-Orel, Antiterror, Redut-Antiterror.[18] Particular attention should be paid to the Moran Security Group (founded in 2011) – a spin-off of the Antiterror PSC. Unlike similar groups, Moran consisted of a "consortium" of smaller companies, and even had a 'marine' branch, which owned a number of vessels, *Ratibor* (ESU2529), *Maagen* (E5U2139), *Anchor 1* (E5U2491) and *Deo Juvante* (E5U2630). The company offered a much broader set of services than the 'standard packages,' with some Russian sources even claiming: "…one of the company's clients was Bashar al-Assad."[19] In effect, there is every reason to believe that the origins of the Wagner group were somehow related to Moran: not only did it stand behind the Slavonic Corps Limited PMC, but also ties of some of the Moran members – including Alexander Kuznetsov[20] – with Wagner have also been proven.

Russia vs. the World: Differences in Practices

As Norwegian research specialists in Russian military and security politics Åse Gilje Østensen and Tor Bukkvoll indicate, the range of services typically provided by the Western private military security companies (PMSCs) consists of "protective security services, military support, and state building services" and "[Western companies] will generally shy away from services that will associate them with mercenaries."[21] Indeed, some tragic occurrences that have happened in the past primarily either resulted from the necessity of self-defence, or were a result of tragic mistakes. One of them was the infamous "Baghdad Massacre" (16 September 2007) that involved Blackwater,[22] when members of this PMSC killed seventeen Iraqi civilians in Nisour Square while escorting a U.S. embassy convoy. Of note, Western PMSCs are completely legal.

For their part, Russian PMCs, such as the Wagner Group, were created for diametrically-opposed reasons, and they operate in line with a different logic. Russian PMCs, *de-jure* non-existent and prohibited by the Russian Penal Code,[23] should be viewed as a part of "*Active Measures 2.0*"[24]: (a) a tool of Russia's covert power politics in strategically important areas; and (b) "power economy" (*silovaja ekonomika*), "…a state-controlled system of coercion (including a reliance on limited-scale military conflicts, if necessary) aimed at realizing economic goals."[25] Therefore, one crucial detail should be noted: (il)legal status of Russian PMCs is not a coincidence – it is a reflection of their true purpose. At the same time, acts of violence accompanying activities of Russian PMCs are not coincidental/defensive. As rightfully noted by Jānis Bērziņš, "Russians, PMCs must be understood as mercenaries in the worst sense of the word," whose main objective is to avoid the direct involvement of Russian armed forces.[26]

What is the Wagner Group?

Among Russian PMCs, the Wagner Group is the most prominent. Its emergence was by no means spontaneous. The Russian General Staff first entertained the necessity to organize PMCs for various "delicate missions abroad" as early as 2010.[27] Yet, it took no concrete steps in this direction. In 2012, Boris Chikin, one of the founders of the Moran PMC, lamented that the global PMC market was being divided between Western players and the lack of opportunities for Russian companies. In effect, a predecessor of the Wagner Group, the Slavonic Corps Limited (2013), was a PMC created by members of the Moran Group and sent to Syria to fight on the side of al-Assad. It was destroyed near al-Sukhnah in eastern Syria.[28] Apparently, Slavonic Corps Limited was a 'trial run' of a more ambitious and better-organized project. Incidentally, one of its leaders, Dmitry Utkin (a retired lieutenant colonel of the Main Directorate of the Russian General Staff, the GU), would later become a commander of the Wagner Group in Ukraine and Syria, where, playing a key role in capturing Aleppo, he would later be decorated with the Order of Courage during a gala held in the Kremlin.[29]

Aleppo, Syria, during the Syrian civil war, 3 April 2013.

ZUMA Press, Inc./Alamy Stock Photo/DWGGG

The Ukrainian crisis played a pivotal role in emergence and the rise of the Wagner Group, whose actual emergence dates to May 2014, and the outbreak of armed conflict in the Ukrainian Southeast, where the group would take part in all major engagements (the Battle of Luhansk Airport, the Battle of Debaltseve), subversive/terrorist operations (the Il-76 shoot-down; provocations in the rear of the Ukrainian armed forces; intelligence gathering), and 'quelling' of the (pseudo-) Cossacks and local strongmen acting as 'cleaners' (*chistilshiki*).[30] While in Ukraine, the group practiced some of the tactics learned earlier in Syria and used by Islamic radicals, which, aside from operations in small and highly maneuvering groups, (commensurate with general principles of non-linear operations that include sabotage, guerrilla/partisan warfare, rapid penetration of the frontline and operations in the enemy's rear), also included the employment of armoured jeeps/vehicles when attacking the enemy formations.[31] The "Ukrainian chapter" of Wagner's history had a crucial meaning, becoming a training polygon and a form of 'marketing tool,' advertising the group and its capabilities to third parties.

> "The "Ukrainian chapter" of Wagner's history had a crucial meaning, becoming a training polygon and a form of 'marketing tool,' advertising the group and its capabilities to third parties."

Ukraine accordingly became a springboard for the group towards much more economically lucrative missions in Syria. Still, operations in Ukraine also played an essential role in the transformation of the entity in terms of its composition, primarily reflected in the decreasing quality of its personnel.

Between 2014 and 2015, according to various testimonies, the core of the group was indeed predominantly composed of highly skilled professionals with vast 'hands-on' experience gained in various regional conflicts. During this period, functions performed by Wagner could be, at some level, compared to tasks vested upon the Russian Special Operations Forces – a flexible, multi-functional force combining qualities of *Spetsnaz* and the armed forces.[32] However, with a swelling in the rank-and-file of the PMC, the entrance requirements and training standards plummeted.[33] Between 2016 and 2017, the tasks performed in Syria by the group drifted away from military operations toward forceful seizure ("*otzhim*" in Russian slang) of oil- and gas-fields/facilities from the anti-al-Assad forces. Further, there is every reason to believe that, at least in part, the group started acting increasingly in concert with pro-Assad forces (uncoordinated, highly diverse and demonstrating not very good war-fighting qualities) and its coordination with the Russian side started to loosen. This transformation increased resentment from the side of Russian neo-conservative nationalists (such as Strelkov), who condemned the Wagner Group and the Russian government for betrayal of Russia's national interests and of drifting away from Russia's key mission (creation of the Novorossiya).[34] Incidentally, one of such missions co-carried out by Wagner led to a debacle near Deir ez-Zor, where the group suffered its largest losses, due to the results of an aerial strike dealt by US forces.[35]

Hassan Blal/Alamy Stock Photo/PGGKXP

What remains of the Deir ez-Zor suspension bridge, 11 August 2018.

In discussing the Wagner Group in Syria, one should make two observations. First, a common inaccuracy is that in Syria, "… the Wagner Group is often used as elite infantry."[36] Although this assumption might be somewhat applicable to the "Ukrainian chapter" of the Wagner history, this argument does not apply to its experiences in Syria. Close analysis of operations carried out by Wagner in Syria suggest the group primarily performed the most arduous tasks in areas of maximum risk or danger. Alternatively, it served as an auxiliary force that assisted Russian regular armed forces – the SOF, on the ground, and the Russian Aerospace Forces (*VKS*) through coordination and terrain reconnaissance[37] – to minimize casualties among Russian regular armed forces akin to Afghanistan and both Chechen wars. Indeed, according to various estimates, the official number of Russian contract soldiers (*kontraktniki*),[38] who were killed in Syria in military engagements was significantly lower than any other party involved. This fact, even though much praised by the Russian military and pro-Kremlin information outlets, failed to attribute some credit to the Russian PMCs that took part in the heaviest battles. Unlike Russian PMCs, elite forces are typically used in high-precision operations – which is clearly visible in the work of the Russian SOF in Syria – and do not typically participate in potentially highly costly frontal attacks.[39] The Wagner Group, however, while in Syria, was used as shock-wave troops, which normally consists of tasks vested upon elite special forces.

The second aspect is related to the Deir ez-Zor disaster suffered by the Wagner Group in early-2018 in Syria. According to some experts, the defeat of the Wagner Group near Deir ez-Zor might have resulted from an alleged disagreement in 2017 between Russia's Defense Minister Sergey Shoygu and Yevgeny Prigozhin, the reported sponsor of the Wagner Group. Thus, the inaction of the Russian Defense Ministry that led to the Deir ez-Zor massacre might have been deliberately staged "…to sacrifice the lives of the veterans who

REUTERS/Alamy Stock Photo/2D036P7

A rebel fighter stands on a Russian-made Scud missile that was found in Junine, about 25 km southwest of Tripoli, 3 September 2011. The missile had been directed at the city of Tripoli.

work for Wagner, in order to send Prigozhin a message."[40] However, the physical eradication of experienced veterans and, perhaps more importantly, giving the United States a reason to claim victory makes little practical sense, especially in light of Russia's growing involvement in Libya. In effect, thorough investigations have demonstrated that in this debacle the major losses were suffered by the pro-Assad and pro-Iranian forces. By contrast Wagner occupied a marginal

part of the overall advancing forces, and was unlikely to be the leading/coordinating force.[41] Following this logic, this means that the Russian MoD 'punished' not Wagner *per se,* but Russia's regional allies. This argument is not plausible. Most likely, members of the Wagner Group fell prey to a combination of poor coordination and over-confidence that the US side would not use its military-technical capabilities to *confront* and to repel the *attacker*.[42] Moreover, as argued by the reputable Russian journalist Petr Kozlov, the Syrian debacle may have had a serious impact upon the Russian ruling elite.[43] Furthermore, the 'punishment theory' may be challenged by post-2018 developments, and by Russia's increasing involvement in Libya. Specifically, Prigozhin was spotted during negotiations between Shoygu and Field Marshal Khalifa Haftar in November 2018,[44] which resulted in the Wagner Group being sent to Libya to support Haftar's Tripoli offensive, the *Operation Flood of Dignity* (April 2019).[45] Another essential aspect is related to the issue of Russian military advisors (which combined legal advisors and members of the Wagner group) in the Central African Republic (CAR), who were deployed to the country in 2018, as a part of technical-material cooperation between the CAR political regime and the Russian MoD.[46] Neither episode could have been performed without the coordination of actions between leadership of the Wagner Group and the Russian MoD.

The Wagner Group: Image and Reality

Between 2014 and 2020, the Wagner Group has been spotted operating on three continents. In this regard, one important aspect should be mentioned: the growing discrepancy between the image of the group (primarily created by Russian and Western media, based upon the group's opera-

tions in Ukraine and Syria), and its actual capabilities. This argument gains more relevance in the light of the operations carried out by Wagner in Libya with respect to the Operation Flood of Dignity[47] and Mozambique. Specifically, despite the fact that Wagner fighters have been sent to Libya to support Haftar's offensive against Tripoli,[48] its results have fallen short of its declared objective. Furthermore, as reported by both Russian and Turkish sources, the Wagner Group suffered its largest losses in manpower since the Syrian debacle in early-2018.[49] These losses have resulted in certain reputational damage. According to available information, following this failure, Russian mercenaries were withdrawn from the frontline zone,[50] which might stem from a combination of factors.

Yet another disappointment has befallen the group in the Sub-Saharan Africa, a region of growing importance to the Kremlin's geo-political/economic calculations.[51] Following the meeting between the President of Mozambique Filipe Nyusi and Vladimir Putin in Moscow (22 August 2019) – when the African guest promised "lucrative contracts" and "ample opportunities" for the Russian businesses in the country[52] – Russian mercenaries were reportedly deployed in the Cabo Delgado province (northern Mozambique) to help the

> **"Furthermore, as reported by both Russian and Turkish sources, the Wagner Group suffered its largest losses in manpower since the Syrian debacle in early-2018."**

government in its up-to-date unsuccessful fight against locally-operating Islamic radicals.[53] According to both Russian and Western sources[54] in pursuit of this contract in Mozambique, Wagner 'outcompeted' leading western PMSCs, primarily due to an advantageous pricing policy and to good relations with the local political leadership. However, the initial excitement was soon replaced by the sobering effect made by the first military encounters with the local rebels. Ambushed by the radicals, Wagner reportedly lost several fighters, with up to twenty Mozambique official military also being killed.[55] According to some unverified sources, this episode prompted the withdrawal of Russian mercenaries from Cabo Delgado.[56] Indeed, these experiences have shown some structural weaknesses showcased by the private military contractors, as well as the fact that this tool, even though effective at the tactical/operative level, is unlikely to gain a strategic role in Russia's military thinking.[57] The main reason behind this assumption boils down to the following: in its actions, the Russian side is delegating PMCs with certain functions – such as military operations that they are not designed to execute, and for which they have no appropriate resources. These functions are typically performed by the regular armed forces, such as the SOF, which is specifically designed for such tasks.

Russia's President Vladimir Putin shakes hands with Mozabique's President Filipe Nyusi during a meeting in Moscow, 22 August 2019

Another shot of armed men, believed to be Russian servicemen, marching outside a Ukrainian military base outside the Crimean city of Simferopol,10 March 2014.

Beyond Wagner: Russian Irregulars and the Western Alliance

Reflecting upon the range of challenges faced by NATO due to Russia's use of PMCs, one essential aspect should be recognized: as the most well-known and notorious entity of its kind, the Wagner Group is neither the root of the problem nor the main peril. As it was convincingly demonstrated in Deir ez-Zor, Libya[58] and Mozambique,[59] the actual military capabilities of the Wagner Group depend upon various conditions. One of them is the close cooperation with Russia's regular armed forces, which secured its success in both Ukraine and Syria. Therefore, from a strictly military perspective, Russian PMCs should not be viewed as a supreme threat, yet those forces could act as 'spoilers,' distracting/disrupting actions of NATO/Western powers in zones of instability.

Arguably, however, a much more serious peril emanates from 'irregulars,' –a broad array of forces that including PMCs, Cossacks, the Night Wolves,[60] members of various military-patriotic organizations/societies, and 'hacktivists,'–that could be used to provoke and destabilize situations. The main challenge stemming from activities of this group was, perhaps, best showcased during Russia's annexation of Crimea. Success of this operation in many ways was inseparable from actions of the irregulars that performed all the "groundwork,"[61]by preparing the 'turf' for the "little green men"[62] – regular armed forces, such as the SOF and the *Spetsnaz*.[63] Some elements of the 'Crimean scenario' could consist of exercises by Russia in other venues or theatres. One such potential areas is the Balkans, where Russia has been using covert operations since the early-1990s through proxy forces, and/or Latvia and Lithuania. Incidentally, during the *Zapad-2017* strategic military exercises (14–20 September), Moscow used both local forces and the Don Army Cossacks as an auxiliary force[64] on the territory of Kaliningrad oblast, which co-hosted the event. Even though this risk does exist and should not be neglected, it appears highly unlikely that Moscow would use the 'Crimean scenario' in or against countries that hold NATO membership. After all, the current operative theatre of Russian PMCs/irregular forces is either confined by the 'borders' of the post-Soviet area, or it extends to places classified as "gray zones." This, however, does not mean that the risk should be excluded completely: Russia is likely to continue testing NATO and its allies through a string of provocations as a means to tackle cohesion of the alliance and the resolve of its members.

Russian military vehicles on the move during the *Zapad-2017* war games near the village of Volka, Belarus, 19 September 2017.

For this purpose, Moscow is already actively using irregulars – primarily, the Night Wolves, Cossacks, various military-patriotic organizations, as well as 'hacktivists,' – to infiltrate, provoke, destabilize and stir up things in other regions/countries/places. Out of a large number of known examples, one must recall the role of Cossacks and PMC members, covered up by the Russian MFA, the Russian Orthodox Church and the Serbian Ministry of Internal Affairs, in radicalizing the Serbian youth, which came to be known as the "Zlatibor affair" – an event that caused huge resonance in the country and required the personal involvement of Serbian President Aleksandar Vučić. The incident revealed strong ties between the Russian MFA, Cossacks, the Serbian Ministry of Internal Affairs and members of some PMCs that had fought in the Donbass.[65] Currently, with respect to the Balkans, Russia's attention is diverted to Bosnia, Montenegro (where Russian agents already tried to carry out a military coup in 2016), and Serbia, which had refused to introduce any anti-Russian sanctions as a result of the unlawful annexation of Crimea. It is highly possible that even NATO/EU membership of the above-mentioned countries would not fully stop Moscow from using covert methods.

NATO and EU flags waving on a blue-sky background.

The second concern is premised upon developments in Russia's westernmost region, the Kaliningrad oblast. Specifically, Kaliningrad-based Cossacks are actively establishing ties, primarily via joint para-military exercises, with The Slavic Union (*Braterstwo Słowian*) and The Movement for the Sovereignty of the Polish People (*Ruch Suwerennośći Narodu Polskiego*) – pro-Russian and anti-NATO -Ukrainian platforms.[66] The direct impact of these ties should not be overrated, and yet, the collateral damage is unpredictable and might become more pronounced in the future.

The third concern relates to the Arctic region, an area of Russia's strategic interests and massive expectations.[67] As the noted French historian, sociologist, and political scientist Marlene Laruelle opines, the Arctic occupies a special place in Russia's economic, geopolitical and ideological calculations.[68] Following the Ukrainian Crisis, Russia began intensifying its efforts towards (re)militarization of the region. Russia's strategy is on many levels commensurate with an idea brought forth by a renowned Russian military expert, Vladislav Shuryghin "[I]n the Arctic region, you do not fight wars with armies and divisions."[69] Indeed, a closer look at Russia's manoeuvres/exercises in the region show high role of small and highly maneuvering formations – elements that are presumably seen by Russia as the main operative force in case of a limited-scale escalation in the region. Aside from military-related aspects, Russia's actions in the region generate interest for yet another reason: by using a mix between facts and provocations and information operations.[70]

> **"The third concern relates to the Arctic region, an area of Russia's strategic interests and massive expectations."**

Conclusion

The emergence of Russian PMCs on the Ukrainian Southeast in 2014 and their subsequent (re)appearance in Syria (2015) created a huge wave of interest toward this phenomenon among Russian and international experts, scholars, journalists, and policy makers. The initial veneer of the omnipotence and invincibility of Russian private military contractors was challenged in 2018 (Syria) and 2019 (Libya and Mozambique). Based upon these examples, it would be adequate to presume that the actual military potential demonstrated by Russian PMCs do not allow to classify this tool as a strategic element within the Russian toolkit. And yet, its importance/capabilities should not be downplayed – under certain circumstances and against specific enemies/adversaries this tool *could* and *will* be very useful. That said, we believe that the main danger to the Western alliance and, in particular, its partners, emanates from 'irregulars' that could be employed in various (both military and non-military) missions, acting – in the case of a potential limited-scale military escalation or preceding events – as an auxiliary forces, which was demonstrated during the annexation of Crimea.

Therefore, we argue that in the short-to-mid-term prospect, main areas of employment of Russian irregular forces (including PMCs) will extend to the following three main areas. *First*, actual (para)military operations will likely be performed by Russian PMCs in resource-endowed and politically unstable countries in the Middle East, the Maghreb, the Sub-Saharan Africa and (potentially) South and Central America (Venezuela and Nicaragua) as well as countries of the post-Soviet space. The employment of these forces in/against EU/NATO member-states should not be expected in a short- and mid-term prospect. *Second*, provocations and 'ground testing' as a means to test the resolve of the Western alliance – an element whose spread will extend beyond the above-mentioned area, including the Balkans, the Arctic region, and the European Union. While the actual impact of these actions should not be overstated – since Russia is unlikely to use offensive potential of irregulars (including PMCs) against EU and NATO members – the Western alliance must be cautious, since some provocations (especially with respect to the Balkans and the three Baltic States) might take place. *Third*, information-psychological operations as an integral part of the war of the new generation (Network-centric warfare) – an element that was demonstrated during the Crimean operation.[71] That said, to understand better and perhaps even re-consider their role, potential areas of employment of Russian irregular formations (including PMCs) and their coordination with Russian regular armed forces, it would be valuable to thoroughly analyze the history of the Ukrainian crisis, paying special attention to the interim between January 2014 and February 2015.

One final aspect should be highlighted. Dr. Christopher R. Spearin of the Canadian Forces College argues that one way to curtail the activities of Russian PMCs is for the United States to place them "…in a normatively defensive context in which utilization is transparent."[72] This scenario, as confirmed by Anthony Pfaff and Edward Mienie of the US Army War College,[73] looks at the problem of Russian PMCs from a Western perspective. Based upon the analysis of operative principles employed by Russian PMCs, whose functions and *de-facto* activities drastically differ from Western PMSCs, legal measures are unlikely to have any impact upon Russian PMCs and other semi-state actors. Although activities of irregulars could be, to some and very limited extent, confronted by legal measures, PMCs could only be targeted by military measures. By inflicting substantial damage on these mercenary formations in 'gray zones,' two main results could be achieved. For one, the recruiting mechanism could be disrupted because the number of qualified recruits is likely to subside dramatically. For another, and most importantly, defeats of mercenaries could well repel third parties from hiring them in the future.

NOTES

1. "This Working Paper was funded by the Defence and Security Foresight Group which receives funding from the Mobilizing Insights in Defence and Security (MINDS) program designed to facilitate collaboration and mobilize knowledge between the Department of National Defence, the Canadian Armed Forces, and academia and other experts on defence and security issues. Through its Targeted Engagement Grants, collaborative networks, scholarships, and expert briefings, MINDS works and collaborates with key partners to strengthen the foundation of evidence-based defence policy making. These partnerships drive innovation by encouraging new analyses of emerging global events, opportunities, and crises, while supporting a stronger defence and security dialogue with Canadians."

2. The most well known examples include the Livonian War (1558 – 1583), the Time of Troubles (1598 – 1613) and the colonization of Siberia (1580 – late-1600s).

3. Valery Gerasimov, "Po opytu Sirii: Gibridnaya voyna trebuyet vysokotekhnologichnogo oruzhiya i nauchnogo obosnovaniya". Voyenno-Promyshlennyy Kurier, no. 9, 2016, at: https://vpk-news.ru/articles/29579; See also: Frank Hoffman, "Hybrid Warfare and Challenges," Joint Forces Quarterly, no. 52, 2009, at: www.dtic.mil/dtic/tr/fulltext/u2/a516871.pdf; Vladimir Rauta (2019): Towards a typology of non-state actors in 'hybrid warfare': proxy, auxiliary, surrogate and affiliated forces, Cambridge Review of International Affairs, DOI: 10.1080/09557571.2019.1656600.

4. "Irregulyarnye voyska v Rossiyskoy imperii," *Mvd.prav-ussr.su*, Accessed 2 February 2019, at: http://mvd.prav-ussr.su/иррегулярные-войска-в-российской-имп/.

5. Igor Eliseev and Aleksey Tikhonov, "V teni piramid," in *Rossiyskaya Gazeta*, №5300 (221), 30 September 2010, at: https://rg.ru/2010/09/30/taina.html.

6. Sergey Sukhankin, "The Russian State's Use of Irregular Forces and Private Military Groups: From Ivan the Terrible to the Soviet Period," in *War by Other Means*, The Jamestown Foundation, 12 April 2019, at: https://jamestown.org/program/the-russian-states-use-of-irregular-forces-and-private-military-groups-from-ivan-the-terrible-to-the-soviet-period/.

7. Lavrenov S.Y. *Sovietskii Soyuz w lokalnikh voinah I konflikta*kh. Artel, Moscow, 2003.

8. "Border wars" were a series of conflicts between Libya and its neighbors, including Chad, Niger and Egypt that took place in the 1970s–1980s. For more information, also see: V.Voronov, A.Artemyev, Sovetskaya shkola Kaddafi: Kak I chemu nauchili armiyu Muammara Kaddafi sovetskie voyennye, SUP Media Gazeta.Ru: Internet-izdaniya, 2011, at: https://www.gazeta.ru/politics/theme/2011/03/31/3571009.shtml

9. Vladimir Voronov and Aleksandr Artemyev, "Sovetskaya shkola Kaddafi," *Gazeta.ru*, 31 March 2011, at: https://www.gazeta.ru/politics/theme/2011/03/31/3571009.shtml.

10. Aleksandra Turchaninova, "Veteran 'Alfy': Eltsyn nas nenavidel ilyubil…, " available at: https://histrf.ru/biblioteka/b/vietieran-alfy-ieltsin-nas-i-nienavidiel-i-liubil.

11. NCnews. "*Sovershenno Dokumentalnoye Rassledovanije sekretno-Spetssluzhby oligarhov*." *Youtube.com*, Projekt Sovershenno Sekretno, 10 February 2013, at: https://www.youtube.com/watch?v=EUZorQLtIGU. See also Mark Galeotti. *The Vory: Russia's Super Mafia* (New Haven, CT: Yale University Press, 2018).

12. Sergey Sukhankin, "From 'Volunteers' to Quasi-PMCs: Retracing the Footprints of Russian Irregulars in the Yugoslav Wars and Post-Soviet Conflicts," in *War by Other Means*, The Jamestown Foundation, 25 June 2019, at: https://jamestown.org/program/from-volunteers-to-quasi-pmcs-retracing-the-footprints-of-russian-irregulars-in-the-yugoslav-wars-and-post-soviet-conflicts/.

13. Igor Strelkov, "Kontrudar," *Zavtra.ru*, 6 January 1998, at: http://zavtra.ru/blogs/1998-01-0751.

14. Mark Galeotti, "Gangster's paradise: how organised crime took over Russia," in *The Guardian*, 23 March 2018, at: https://www.theguardian.com/news/2018/mar/23/how-organised-crime-took-over-russia-vory-super-mafia.

15. "Kratkaya istoriya chastnoy ochrany RF," *Nastrussia.ru*, 2 June 2012, at: http://www.nas-trussia.ru/russia/blogpost/126-kratkaya-istoriya-rossijskoj-chastnoj-okhrany?start=1.

16. NCnews. "Sovershenno sekretno-Spetssluzhby oligarhov." *Youtube.com*, 10 February 2013, at: https://www.youtube.com/watch?v=EUZorQLtIGU.

17. Charles Gurin, "ROMAN TSEPOV, R.I.P.," *The Jamestown Foundation*, Eurasia Daily Monitor Volume: 1 Issue: 93, 27 September 2004, at: https://jamestown.org/program/roman-tsepov-r-i-p/.

18. Sergey Sukhankin, "From 'Volunteers' to Quasi-PMCs: Retracing the Footprints of Russian Irregulars in the Yugoslav Wars and Post-Soviet Conflicts," *War by Other Means*, The Jamestown Foundation, 25 June 2019, at: https://jamestown.org/program/from-volunteers-to-quasi-pmcs-retracing-the-footprints-of-russian-irregulars-in-the-yugoslav-wars-and-post-soviet-conflicts/.

19. Sergey Lyutykh, "Umru za Rodinu. Dorogo," *Lenta.ru*, February 1, 2018, https://lenta.ru/articles/2018/02/01/chvk/.

20. Denis Korotkov, "Brodyaga, Sedoy, Wagner i Ratibor okruzhyli prezidenta," *Fontanka.ru*, 21 August 2017, at: https://www.fontanka.ru/2017/08/18/103/.

21. Åse Gilje Østensen and Tor Bukkvoll, "Russian Use of Private Military and Security Companies - the implications for European and Norwegian Security." *FFI Rapport no. 18/01300*, CMI - Chr. Michelsen Institute, 2018, at: https://www.cmi.no/publications/6637-russian-use-of-private-military-and-security.

22. Phil Stewart, "U.S. troops in Iraq will need immunity: U.S. chief," *Reuters*, 2 August 2011, at: https://www.reuters.com/article/us-iraq-usa/u-s-troops-in-iraq-will-need-immunity-u-s-chief-idUSTRE7711PX20110802.

23. Sergey Sukhankin. "'A black cat in the dark room': Russian Quasi-Private Military and Security Companies (PMSCs) – 'Non-existent,' but Deadly and Useful," in *Canadian Military Journal*, Vol. 19, No. 4, Autumn 2019.

24. Andrei Soldatov and Irina Borogan. *The New Nobility: The Restoration of Russia's Security State and Enduring Legacy of the KGB* (New York: Public Affairs, 2010).

25. Aleksandr Ageev, "Silovaya ekonomika I smena mirovogo gegemona," *Strategicheskie prioritety*, No. 2 (6) (2015), pp. 27–48.

26. Jānis Bērziņš. The Russian Way of Warfare (pp. 17–21), in: Current Russian Military Affairs. Assessing and Countering Russian Strategy, Operational Planning, and Modernization. SSI, Current Russian Military Affairs, Conference Executive Summaries. John R. Deni, (ed.), July 2018.

27. Irina Malkova, Anton Bayev, "Chastnaya armiya dlya prezidenta: istoriya samogo delikatnogo porucheniya Yevgeniya Prigozhina," in *The Bell*, 29 January 2019, at: https://thebell.io/41889-2/.

28. Sergey Sukhankin, "Russian PMCs in the Syrian Civil War: From Slavonic Corps to Wagner Group and Beyond," in *War by Other Means*, The Jamestown Foundation, 18 December 2019, at: https://jamestown.org/program/russian-pmcs-in-the-syrian-civil-war-from-slavonic-corps-to-wagner-group-and-beyond/.

29. "Utkin Dmitrij Valerevich," in *Myrotvorets*, 16 December 2016, at: https://myrotvorets.center/criminal/utkin-dmitrij-valerevich/.

30. Sergey Sukhankin, "Unleashing the PMCs and Irregulars in Ukraine: Crimea and Donbas" in *War by Other Means*, The Jamestown Foundation, 3 September 2019, at: https://jamestown.org/program/unleashing-the-pmcs-and-irregulars-in-ukraine-crimea-and-donbas/.

31. "Intervyu rossiyskikh naemnikov Botvinyevykh: 'Wagnera' na Donbasse trenirovali nashy kadrovye voyennye iz 'Vympela.' Ryadovoy 'Wagnera' poluchal 180 tysyach rubley," *Censor.net.ua*, 18 May 2018, at: https://censor.net.ua/resonance/3066311/intervyu_rossiyiskih_naemnikov_botvinevyh_vagnera_na_donbasse_trenirovali_nashi_kadrovye_voennye_iz.

32. Sergey Sukhankin, "Russian Special Operations Forces: Image Versus Substance," in *Eurasia Daily Monitor* Volume: 16 Issue: 43, The Jamestown Foundation, 27 March 2019, at: https://jamestown.org/program/russian-special-operations-forces-image-versus-substance/.

33. Denis Korotkov, "Oni srazhalis za Palmiru," in *Fontanka.ru*, 29 March 2016, at: https://www.fontanka.ru/2016/03/28/171/.

34. Igor Strelkov (Girkin), "'Chastniki' Chast 1-4,"in *Vbloknot.com*, 14 July 2018, at: https://vbloknot.com/18446-igor-strelkov-chastniki.html

35. While the accurate number is unknown, the most realistic number of Russian mercenaries killed should be seen closer to twenty men. For more information see: Christoph Reuter, "The Truth About the Russian Deaths in Syria," in *Spiegel.de*, 2 March 2018, at: https://www.spiegel.de/international/world/american-fury-the-truth-about-the-russian-deaths-in-syria-a-1196074.html.

36. Gostev, A., and R. Coalson, "Russia's Paramilitary Mercenaries Emerge from the Shadows." *RFE/RL.org*, 16 December 2016, at: https://www.rferl.org/a/russia-paramilitary-mercenaries-emerge-from-the-shadows-syria-ukraine/28180321.html.

37. Sergey Sukhankin, "Russian PMCs in the Syrian Civil War: From Slavonic Corps to Wagner Group and Beyond," in *War by Other Means*, The Jamestown Foundation, 18 December 2019, at: https://jamestown.org/program/russian-pmcs-in-the-syrian-civil-war-from-slavonic-corps-to-wagner-group-and-beyond/

38 Sarah Fainberg. Russian Spetsnaz, Contractors and Volunteers in the Syrian Conflict. No. 105, Ifri, December 2017, at:https://www.ifri.org/en/publications/notes-de-lifri/russieneivisions/russian-spetsnaz-contractors-and-volunteers-syrian

39 Examples of Budyonnovsk and other follies committed by Russian armed forces during the First Chechen War should be attributed to the general state of disarray in the Russian army. For more information see: Yuri Demin. Bitva za Budennovsk. Spetsnaz Rossii. 31 May 2015, at: http://www.specnaz.ru/articles/224/8/2249.htm

40 Kimberly Marten, "Russia's use of semi-state security forces: the case of the Wagner Group," in *Post-Soviet Affairs*, 35:3, 2019, 181-204, DOI: 10.1080/1060586X.2019.1591142; Kimberly Marten, "The Puzzle of Russian Behavior in Deir Al-Zour." in *War on the Rocks*, at: in https://warontherocks.com/2018/07/the-puzzle-of-russian-behavior-in-deir-al-zour/

41 Sergey Sukhankin, "Russian PMCs in the Syrian Civil War: From Slavonic Corps to Wagner Group and Beyond," in *War by Other Means*, The Jamestown Foundation, 18 December 2019, at: https://jamestown.org/program/russian-pmcs-in-the-syrian-civil-war-from-slavonic-corps-to-wagner-group-and-beyond/

42 Christoph Reuter, "The Truth about the Russian Deaths in Syria," in *Spiegel.de*, 2 March 2018, at: https://www.spiegel.de/international/world/american-fury-the-truth-about-the-russian-deaths-in-syria-a-1196074.html.

43 Petr Kozlov, "Putin zamenil rabochie poezdki na vstrechu s generalami. Vozmozhno iz-za Sirii," *BBC.com*, 13 February 2018, at: https://www.bbc.com/russian/news-43051143.

44 Irek Murtazin, "Na etoy kukhne chto-to gotovitsya," in Novaya Gazeta, 9 November 2018, at: https://novayagazeta.ru/articles/2018/11/09/78517-na-etoy-kuhne-chto-to-gotovitsya.

45 Samer Al-Atrush, "Libya's Prime Minister Says Russia Mercenaries Will Drag Out War," in *Bloomberg*, 14 November 2019, at: https://www.bloomberg.com/news/articles/2019-11-14/libya-s-prime-minister-says-russia-mercenaries-will-drag-out-war.

46 Sergey Sukhankin, "Russia's hired guns in Africa," in *ECFR.eu*, 12 November 2018, at: https://www.ecfr.eu/article/commentary_russias_hired_guns_in_africa.

47 "Khalifa Haftar, Libya's strongest warlord, makes a push for Tripoli," in *The Economist*, 5 April 2019, at: https://www.economist.com/middle-east-and-africa/2019/04/05/khalifa-haftar-libyas-strongest-warlord-makes-a-push-for-tripoli.

48 Samer Al-Atrush and Stepan Kravchenko, "Putin-Linked Mercenaries Are Fighting on Libya's Front Lines," in *Bloomberg*, 25 September 2019, at: https://www.bloomberg.com/news/articles/2019-09-25/putin-s-chef-deploys-mercenaries-to-libya-in-latest-adventure.

49 Liliya Yapparova, "Oni sami tolkom ne znali, kuda edut," in *Meduza.io*, 2 October 2019, at: https://meduza.io/feature/2019/10/02/oni-sami-tolkom-ne-znali-kuda-edut.

50 "Boytsy ChVK Wagnera pokinuli liniyu fronta v Livii," in *Lenta.ru*, 11 January 2020, at: https://lenta.ru/news/2020/01/11/gone/.

51 Sergey Sukhankin, "The 'Hybrid' Role of Russian Mercenaries, PMCs and Irregulars in Moscow's Scramble for Africa," *War by Other Means*, The Jamestown Foundation, 10 January 2020, at: https://jamestown.org/program/the-hybrid-role-of-russian-mercenaries-pmcs-and-irregulars-in-moscows-scramble-for-africa/. James Sladden, Becca Wasser, Ben Connable, Sarah Grand-Clement. Russian Strategy in the Middle East. RAND Corporation, 2017, at: https://www.rand.org/pubs/perspectives/PE236.html

52 Edvard Chesnokov, "President Mozambika: Rossiya spisala 90% nashego dolga, my tsenim takih partnerov," in *KP.ru*, 21 August 2019, at: https://www.kp.ru/daily/27019.4/4081204/

53 .Sergey Sukhankin, "Russia Prepares a Foothold in Mozambique: Risks and Opportunities," in *Eurasia Daily Monitor* Volume: 16 Issue: 142, The Jamestown Foundation, 15 October 2019, at: https://jamestown.org/program/russia-prepares-a-foothold-in-mozambique-risks-and-opportunities/.

54 Pjotr Sauer, "In Push for Africa, Russia's Wagner Mercenaries Are 'Out of Their Depth' in Mozambique," in *The Moscow Times*, 19 November 2019, at: https://www.themoscowtimes.com/2019/11/19/in-push-for-africa-russias-wagner-mercenaries-are-out-of-their-depth-in-mozambique-a68220.

55 "Insurgentes Emboscam e Matam 20 Membros das FDS e cinco russos," in *Carta de Mocambique*, 29 October 2019, at: https://cartamz.com/index.php/politica/item/3469-insurgentes-emboscam-e-matam-20-membros-das-fds-e-cinco-russos.

56 "Nayemniki ChVK 'Wagner' otstupili iz Kabo-Delgado," in *Infonavigator.com*, 25 November 2019, at: https://infonavigator.com.ua/gibridnyj-front/najomniki-chvk-vagner-otstupili-iz-kabo-delgado/.

57 Sergey Sukhankin, "Continuation of Policy by Other Means: Russian Private Military Contractors in the Libyan Civil War," in *Terrorism Monitor* Volume: 18 Issue: 3, The Jamestown Foundation, 7 February 2020, at: https://jamestown.org/program/continuation-of-policy-by-other-means-russian-private-military-contractors-in-the-libyan-civil-war/.

58 Sergey Sukhankin, "Mercenaries in the Desert: The Kremlin's Libya Game," in Fair Observer, 16 October 2019, at: https://www.fairobserver.com/region/middle_east_north_africa/russia-policy-khalifa-haftar-libya-conflict-middle-east-security-news-99765/.

59 Sergey Sukhankin, "Russian Mercenaries Pour Into Africa and Suffer More Losses (Part One)," in *Eurasia Daily Monitor* Volume: 17 Issue: 6, The Jamestown Foundation, 21 January 2020, at: https://jamestown.org/program/russian-mercenaries-pour-into-africa-and-suffer-more-losses-part-one/; Sergey Sukhankin, "Russian Mercenaries Pour Into Africa and Suffer More Losses (Part Two)," 28 January 2020, in *Eurasia Daily Monitor* Volume: 17 Issue: 10, The Jamestown Foundation, at: https://jamestown.org/program/russian-mercenaries-pour-into-africa-and-suffer-more-losses-part-two/.

60 Matthew A. Lauder. "Wolves of the Russian Spring': An Examination of the Night Wolves as a Proxy for the Russian Government." In *Canadian Military Journal*, Vol. 18, No. 3, 2018, pp. 1-16.

61 "Dary volkhvov pribyli v Krym," in *Pravoslavie.ru*, 31 January 2014, at: https://pravoslavie.ru/68048.html.

62 Mark Galeotti, "'Hybrid War' and 'Little Green Men': How It Works, and How It Doesn't," E-International Relations, 16 April 2015, at: https://www.e-ir.info/2015/04/16/hybrid-war-and-little-green-men-how-it-works-and-how-it-doesnt/.

63 Sergey Sukhankin, "Unleashing the PMCs and Irregulars in Ukraine: Crimea and Donbas," *War by Other Means*, The Jamestown Foundation, 3 September 2019, at: https://jamestown.org/program/unleashing-the-pmcs-and-irregulars-in-ukraine-crimea-and-donbas/#_edn19.

64 "Donskie kazaki na Baltike," in *Vsevelikoe Voysko Donskoye*, 12 September 2017, at: www.don-kazak.ru/news/kazaki-na-baltike/.

65 For more information, see Sergey Sukhankin, "Russian PMCs, War Veterans Running 'Patriotic' Youth Camps in the Balk ans (Part One)," in *Eurasia Daily Monitor* Volume: 15 Issue: 151, The Jamestown Foundation, 24 October 2018, at: https://jamestown.org/program/russian-pmcs-war-veterans-running-patriotic-youth-camps-in-the-balkans-part-one/; Sergey Sukhankin, "Russian PMCs, War Veterans Running 'Patriotic' Youth Camps in the Balkans (Part Two)," in *Eurasia Daily Monitor* Volume: 15 Issue: 155, The Jamestown Foundation, 31 October 2018, at: https://jamestown.org/program/russian-pmcs-war-veterans-running-patriotic-youth-camps-in-the-balkans-part-two/.

66 "Politicheskiye obshchestvenniki Polshy ustroili pod Kaliningradom perfomans," in *EurAsia Daily*, 26 August 2018, at: https://eadaily.com/ru/news/2018/08/26/politicheskie-obshchestvenniki-polshi-ustroili-pod-kaliningradom-perfomans.

67 Sergey Sukhankin, "Russia Prepares Ambitious Economic Strategy for Arctic Region," in *Eurasia Daily Monitor* Volume: 17 Issue: 18, The Jamestown Foundation, 11 February 2020, at: https://jamestown.org/program/russia-prepares-ambitious-economic-strategy-for-arctic-region/.

68 Marlene Laruelle. *Russia's Arctic strategies and the future of the Far North*. M.E. Sharpe, Inc., 2014.

69 Alexandr Kruglov, Aleksey Ramm, "V Arktike budet zharko: voyska ispytayut Kraynim Severom," in *Izvestiya*, 18 December 2018, at: https://iz.ru/822691/aleksandr-kruglov-aleksei-ramm/v-arktike-budet-zharko-voiska-ispytaiut-krainim-severom.

70 Sergey Sukhankin, "Russian Spetsnaz in Norway: 'Fake News' Versus Facts," in *Eurasia Daily Monitor* Volume: 16 Issue: 139, The Jamestown Foundation, 9 October 2019, at: https://jamestown.org/program/russian-spetsnaz-in-norway-fake-news-versus-facts/.

71 Viktor Murakhovskiy, "Krymskaya operatsiya – ochevidnyj marker kachestvenno novogo urovnya razvitiya Rossiyskoy armii," in *Natsyonalnaya Oborona*, accessed 10 February 2020, at: http://oborona.ru/includes/periodics/main-theme/2014/0623/113513418/detail.shtml.

72 Christopher R. Spearin. "Russia's Military and Security Privatization," in The US Army War College Quarterly. Vol. 48 No. 2 (2018), pp. 39-49.

73 C. Anthony Pfaff, and Edward Mienie. Strategic Insights: Five Myths Associated With Employing Private Military Companies. Strategic Studies Institute (SSI), 5 April 2019.

THE WORLD IN WHICH WE LIVE

A CP-140 *Aurora* overflies HMCS *Glace Bay* during Operation *Nanook 2020*, 21 August 2020.

The Lockheed CP-140M *Aurora*, Canada's Current Long Range Patrol Fleet

by Bernie Thorne

Lieutenant-Colonel Bernie Thorne, MSc, MPA, CD, is an Air Combat Systems Officer (ACSO) with over 32 years of Regular Force service, and is now a reservist helping to field the newest updates to the CP-140M Aurora *as the Director of Block 4 Implementation. He has attained just short of 4000 flying hours in the* Aurora, *has witnessed the breadth of* Aurora *operations over 30 years, and has seen the aircraft updated through all Blocks of the modernization program. He has also commanded twice within the CP-140M fleet, and has also 'done time' in Ottawa at the national headquarters – lastly as the head Career Manager for the Air Force. Bernie also now keeps a small vineyard in the Annapolis Valley of Nova Scotia.*

The CP-140M Block 4 *Aurora* – Sharing Future Secrets

Winnipeg, April 7, 2024. The Regional Joint Task Force (RJTF) liaison to the On Scene Command (OSC) of the flood catches up to the situation at the watch brief to the incoming OSC. "Generally, with the amount of snow accumulated this past year, and the rapidity of the spring melt with the warm, heavy rain, we saw a rapid rise that may surpass the levels from 1997. We believe that the peak water is at the floodway now and expect to see water going down inside the city within the next 2 days. We have a CP-140M doing overwatch of the flood, and our responders on the ground seem to be catching their breath. Several items of note in the past few hours: a pumping station in Osbourne Village had its dike fail, we expect the water pressure to go down in the area, and we have started testing water quality hourly – no boil water order required yet. It seems one of the families on Turnbull Avenue did not evacuate as ordered, and they were found sitting on their garage roof after their dike failed. The local Fire Hall is responding. The city is in tough shape, but we seem to be at the peak now, and are just watching for dike failures. Ten minutes ago, we had a report that Highway 204 near the Selkirk Bridge is flooded. We are not expecting the crest to reach Selkirk for another 2 days, and asked the military to take a look right away."

Introduction

The CP-140M *Aurora* operates from two Main Operating Bases, 14 Wing in Greenwood Nova Scotia and 19 Wing in Comox British Columbia. Each Wing is supported by an Air Maintenance Squadron (14 and 19 AMS) who deal with maintenance beyond the daily flying, and also by an Operational Support Squadron (14 and 19 OSS) who provide airfield services and mission preparation (Intelligence, Meteorology, Mission Data Loads, and so on).

Three CP-140M Squadrons operate from 14 Wing Greenwood. 405 Squadron is the operational Squadron and takes the bulk of east coast Force Employment (FE) missions, although the other 14 Wing Squadrons also conduct operations to maintain proficiency or to balance task levels. 405 Squadron maintenance handles the flight line for all Greenwood CP-140Ms. 404 Squadron is the training or Force Generation (FG) Squadron, operates most simulators, and delivers initial qualification of both aircrew and maintainers on the fleet. 415 Squadron leads Force Development (FD) for the fleet, from identifying future requirements to developing tactics.

One CP-140M Squadron operates from 19 Wing Comox. 407 Squadron is the second operational Squadron in the fleet, and it carries the bulk of FE missions from the west coast.

CP-140 *Aurora* Aircraft Origins

In the early-1970s, the Long Range Patrol Aircraft (LRPA) project was activated to replace the venerable (24 years at retirement) Canadair *Argus*. The Lockheed CP-140 bid won the contract, and the CP-140 *Aurora* derived from a number of Lockheed aircraft, most notably the P-3 *Orion* airframe and the S-3 *Viking* computer and sub-hunting suite. Although not known at the time, the CP-140 also effectively replaced the CP-121 *Tracker*, with the Coastal Patrol Aircraft (CPA) replacement project being terminated in the mid-1990s.

The first CP-140 *Aurora* flew out of the Lockheed factory in 1979, and delivery of the 18 aircraft contract commitment sped along between 1980 and 1981. Each of these aircraft were rated originally for a service life of 25,000 flight hours. A minor side note pertaining to the CP-140 fleet was the delivery of three CP-140A *Arcturus* in 1992 and 1993 to take some of the non-ASW roles away from the overworked fleet CP-140s. These *Arcturus*, while fundamentally a CP-140 airframe but lacking many of the *Aurora*'s detection systems, were retired from operational service in the mid-2000s after heavy use, although one remains in the fleet as a maintenance trainer at 404 Squadron.[1]

CP-140 Updates

Expected to have a service life similar to the *Argus*, a single *Aurora* mid-life Upgrade was pursued beginning in the early-1990s. However, the mid-1990s proved to be a challenging period to seek large capital military funding. After several years of effort, the project staff changed strategy to advance an *Aurora* Incremental Modernization Program (AIMP), with three planned Blocks and one optional fourth Block. This approach caused significantly increased change costs within the project staff, but the fleet did obtain funding for the planned upgrades. Block 1 addressed immediate sustainability issues, such as an HF radio for which parts were no longer available and the removal of obsolescent systems that had not been turned

> **"In the early-1970s, the Long Range Patrol Aircraft (LRPA) project was activated to replace the venerable (24 years at retirement) Canadair *Argus*."**

on in years. Block 2 updated navigation and communication equipment communicating over a 1553 databus. Block 3 updated most sensors, provided a capable mission computer allowing work to be done flexibly at different crew workstations, and installed several networks inside the aircraft to exchange the massive amounts of sensor and mission data. The AIMP project was paused for a period during Block 2 production, but then resumed. Only 14 of the 18 CP-140 *Auroras* were upgraded to Block 3, and gained the moniker CP-140M (M for modernized). One Block 2 CP-140 remains flying today, serving to take propulsion and flight deck prototyping work from the small CP-140M fleet.

Several notable (and many smaller) projects have occurred over the same period as AIMP. As the service life of the CP-140 has vastly surpassed what had been expected, significant study and effort went into ensuring the aircraft remained safe to fly. Studies in what airframe parts could fail led to an *Aurora* Service Life Extension Program (ASLEP) that replaced the wings and vertical stabilizer. Leading up to this project, the aircrew were limited in manoeuvres and speed to reduce airframe strain, and extra maintenance steps were taken to keep the aircraft safe to fly. ASLEP reset/reduced the service life to 15,000 hours per airframe. Due to the rising importance of overland operations, and stand-off visual identification in the maritime domain, the fleet installed the WESCAM MX-20 EO/IR turret, Tactical Common Data Link (TCDL), and an interim laptop computer network with moving map display called the Overland Equipment Mission Suite (OEMS) before Block 3 upgrades commenced. Eventually, in order to send CP-140M surveillance data back Beyond Line Of Sight (BLOS) during Operation *Impact,* an interim BLOS (iBLOS) satellite communication system was very rapidly installed on a small number of Block 3 aircraft.

The original plan for Block 4 was an update to obsolescent systems, and perhaps, a precision stand-off weapon, such as SLAM-ER, to expand beyond the purely Anti-Submarine Warfare (ASW) weapons carried today. Operational imperatives change, and the need to share situational awareness with other war-fighters and other partners not sharing the 'eyes' of the CP-140M became more important. The Block 4 project includes three major new capability elements. First, a BLOS communication system that uses the Worldwide Global Satellite communication (WGS) system delivered by the Mercury Global project. In a generic sense, the aircraft will be certified to join the Consolidated Secure Network Infrastructure (CSNI) domain over WGS via the Mission Support Centre (MSC) CNET enclave. Second, a Link-16 terminal that operates on both Line Of Sight (LOS) and BLOS. Third, a Directed Infra-Red Counter Measures (DIRCM) self-protection system was approved to provide limited protection for a number of aircraft. Block 4 also delivers more and cleaner electrical power, and refreshes servers, networks and interoperability standards for both sensor and mission computers.

DND photo by LS Louis-Phillipe Dubé, 14 Wing Imaging

Arrival of first Block 4 CP-140M in Greenwood, 21 February 2020.

considered. Minor software and hardware updates are always 'in the works,' and the CP-140M aggregates changes in an 18-month update cycle that balances speed with the fleet ability to adapt to the changes. Updates to simulators, labs and support equipment must stay in lockstep with the aircraft.

It could be viewed that these significant updates are required due solely to the age of the aircraft, but this is only partially correct. Needing to replace wings and engines do indeed result from long service. Technical updates, however, whether from a changing world or from changing operational requirements, will occur with any fleet routinely, sometimes even before initial delivery. The more advanced equipment is procured and the more operational roles are assigned, the more sensitive the aircraft is to change - and the more energy that must be dedicated to keeping up with change. Perhaps no other aircraft in the world is thus as sensitive to change as the Canadian CP-140M LRP fleet. Little wonder the fleet has a Force Development (FD) Squadron dedicated to managing change.

It should be evident that the number of sensor, navigation, communication, network and mission computer equipment on-board the CP-140M is very sensitive to changes in technology. If a supported war-fighter changes from a LINK-11 to a LINK-22 system, the CP-140M must keep pace, or we no longer communicate. If the world's civilian air control upgrades navigation and communication requirements to make airspace denser and/or safer, the CP-140M must update or lose access to other nations' airspace. The latest defence policy, *Strong Secure and Engaged,* has identified that the CP-140M will eventually be replaced, and estimates identify that replacement to occur around 2035; but we military folk always plan for contingencies. To ensure there is no gap in capability, the Weapon System Manager (WSM) is studying what work will need to be done to keep the CP-140M operational until the 2035-2040 period. There will clearly be some major updates and many minor refreshes required to keep the CP-140M operational over this period.

A number of significant projects post-Block 4 are already in various stages of planning or approval, supporting the mandate of keeping the CP-140M operationally viable until the arrival of its successor. International airspace regulation updates require new navigation equipment to allow safe flight, and a number of omnibus and fleet-specific projects are running within the WSM to ensure continued ability to deploy. Crypto modernization requires new communication equipment and a new military Identify Friend or Foe (IFF) system. The old engines on the CP-140M (common with the old H Model C-130 *Hercules*) are becoming costly to maintain, and an update to the same power plant as the newer J Model *Hercules* is being considered. A single kit 'buy-and-try' update for the MX-20 camera is also being

> **"The radar has two planer array antennas mounted back-to-back, and they can do autonomous roles or be used in synchronization to double the data provided to a single role."**

Some CP-140M Capabilities

The long-range/endurance aircraft, varied and capable sensors, communications suite, mission support elements and the crews trained to many different roles and missions result in a flexible capability. Few outside the operational fleet understand what operational effects it can deliver to the mission, and this has sometimes limited its employment, and the benefits gained when it is employed. Describing all technical capabilities would be both classified and a long dry read. For those professionally interested, a classified capability brief is being worked for the CJOC that describes the capabilities as well as suggested employment in expected operations. A few capabilities must be introduced here in a simplified manner to both give a sense of the total capability, but also to provide understanding of an unclassified operational vignette, which will be addressed later.

The radar has two planer array antennas mounted back-to-back, and they can do autonomous roles or be used in synchronization to double the data provided to a single role. It has an auto-detect and auto-track system, which is used for building the Recognized Maritime Picture (RMP), and a Ground Moving Target Indicator

(GMTI) mode that tracks moving targets overland. It can be employed in several imaging modes, including a Side-Looking Aperture Radar (SLAR) mode that delivers high resolution radar strip maps that look like monochrome imagery. Radar analysis tools allow automatic change recognition that highlights changed areas such as moved vehicles, flooded areas, landslides, blast areas, digs, removed walls/buildings, etc. The positional accuracy of radar is quite precise and can be used to cross cue to other sensors, such as the EO/IR video camera or to pass to other assets.

The EO/IR camera was arguably the most capable analog long-range surveillance camera ever built. Is has an EO-wide, an EO-narrow with very long range, and IR mode. It has been updated with a laser rangefinder to improve the sensor's positional accuracy. Most everyone will have seen this camera in use as it has been widely employed by police, news and sport/movie shoots. If it was an overhead shot from a decade-or-two ago – it was likely a version similar to this. State-of-the-art cameras are now digital with higher resolution, better sensitivity, and so on, but with suitable parts remaining broadly available, this one has lost none of its original capability. As previously mentioned, a 'buy-and-try' of a modern camera is being considered by the CP-140 WSM.

To share this information, the CP-140M uses the communication standards of our closest allies to ensure interoperability. In operations where there is not an asset with which we share broad interoperability, the CP-140M fleet has Deployable Mission Support Centres (DMSCs) that can be pre-positioned to give access to all information and to provide communications to enable Command and Control. The notable systems shared by the Block 4 CP140M and the DMSC are; Line-Of-Sight (LOS) radios, an Iridium satellite phone, HF radios, TCDL network (K-band), LINK-11, LINK -16, WGS satellite with common services on the CSNI network (Chat, email, VOIP, Sensor Databases, and so on). The DMSC also has CP-140M experts who can act as Liaison Officers (LO) to explain capabilities and recommend employment. The MSCs at 14 and 19 Wing offer the same capabilities as the MOBs.

Without going into detail, the CP-140M also has a robust suite of sensors for Anti-Submarine Warfare (ASW), and will be updated to the new Mk.54 ASW torpedo. It has an Electronic Surveillance Measures (ESM) system that includes auto-classification, auto-fixing and Specific Emitter Identification (SEI) for emitters pre-programmed in the mission data load. It carries a variety of hand-held sensors (video and still cameras, night-vision goggles, and so on). Its communication suite can provide radio relay for units out of range of each other. TCDL-equipped units could use the CP-140M to act as a post-box to send and receive data.

This very quick introduction should give the appreciation that the CP-140M is a very capable and flexible weapon system. It *can* and *does* perform a wide variety of missions around the world.

Operations Overview

The flexible CP-140M capability *has been* and *continues to be* employed across a very broad range of missions, and to support a very comprehensive list of Military Commanders and Other Government Departments (OGDs). The original focus of the CP-140 was almost exclusively a Maritime asset; Cold War ASW and direct support to naval task groups were the prime roles, while surveillance of the domestic maritime approaches and Search and Rescue (SAR) were among important secondary roles. In a perhaps unfortunate[2] circumstance, the primary roles of the CP-140 were classified missions, flown from home or allied MOBs, sometimes armed, often remote and dangerous, but unknown and unacknowledged by either the military or the public at large.[3]

DND photo by Sgt Shilo Adamson, CFB Borden

(From left), Master-Corporal Kevin Hardy, lead Airborne Electronic Sensor Operator (AESOP), Patricia DeMille, Fishery Officer for the Department of Fisheries and Oceans (DFO), and Corporal Brett Galliford, AESOP and the Non-Acoustic Sensor Operator (NASO) for the CP-140 *Aurora* work together to identify possible vessels of interest engaged in illegal fishing during Operation *Driftnet*, 18 July 2017.

The employment of the CP-40/140M slowly grew beyond these initial roles. However, OGDs and civilian agencies developed some *enduring,* as well as a number of *one-off* support requests. The domestic maritime surveillance capabilities gained the attention of the Department of Fisheries and Oceans (DFO), who began requesting flying their specialists on the CP-140 for fisheries patrols around Canada and supporting international fisheries agreements on the high seas (i.e. Drift Net). The CP-140 predominance over water allowed it to catch polluters inside the Canadian EEZ, and the CP-140/140M became Environment Canada's (Now Environment and Climate Change) largest source of prosecutions. Similarly, the RCMP began requesting the CP-140 to locate and track vessels of interest – shadowing them and any accomplices until they could be taken. Natural disasters needing swift situational awareness to plan rescue and recovery began using the CP-140 for such as floods in Winnipeg under Operation *Lentus*, or for assessing the Hydro Quebec power lines following the Ice Storm. Some air-dropped geo-buoys were used to record seismic data, supporting Canada's claim to the Arctic. The CP-140M continues to be requested to support a 14-nation coalition to counter illicit narcotic trafficking on Operation *Caribbe*. The CP-140/140M sensors and eyes have been used to record seals, whales, icebergs, ice cover, temperature levels in the oceans, and others.[4]

Military roles also began to proliferate. The long range and ability to self-deploy made the CP-140 the best choice to conduct sovereignty patrols in the north, seeking activity and taking imagery to assess the condition of remote sites. Primary Search-and-Rescue (SAR) assets that were better at low-level visual search began to leverage the CP-140 instead to coordinate and control the air search when many assets were on-scene, such as the eight helicopters and one CC-130 *Hercules* that responded to the SwissAir 111 Search and Rescue mission. A now-obsolete *Applanix* camera from the DND Mapping and Charting Establishment (MCE) was temporarily installed on the CP-140 to record high resolution mapping imagery in Afghanistan. Fighter aircraft that cross oceans often request escort, a *Duck Butt*, from a CP-140/140M carrying deployable life rafts. International agreements resulted in a number of Maritime Interdiction Operations (MIO) to counter piracy, such as Operation *Artemis,*[5] or support UN sanctions, such as during Operation *Sharp Guard*.[6] A significant additional area of operations really 'kicked into high gear' just over a decade ago. Commencing with the EO/IR, TCDL and overland equipment mission suite updates, the CP-140 began to be requested to support traditional land forces and Special Operations.

These paragraphs are not exhaustive, but are intended to show the flexibility of the platform and the many agencies supported across a multitude of roles. The CP-140 *has* and *does* work for OGDs during both normal days and disasters over Canadian waters, land and ice. The military roles have gone far beyond the original maritime Cold War roles. Of significant historical note, recent operations have focused CP-140M efforts overland, and perhaps at cost to the traditional roles.

DND photo by LS Dan Bard, Formation Imaging Services, Halifax

Arabian Sea, 9 October 2013. Boarding party members from HMCS *Toronto* board a suspect dhow during Operation *Artemis*.

DND photo by Corporal Mathieu St-Amour

Captain Barrie Ransome, Task Force *Libeccio* CP-140 *Aurora* pilot, looks out his cockpit window during a patrol off the coast of Libya, 30 September 2011, as part of Operation *Mobile*.

and the 2-plane 2011 detachment to Sigonella attained 99% mission attainment over 179 missions. A significant shortage of Long Range Patrol (LRP) assets, as well as the CP-140's inherent flexibility marked them as a tightly-contested asset that conducted a range of roles in the months of the operation. Maritime surveillance was required to enable an embargo. Information Operation radio broadcasts were transmitted deep into Libya. The CP-140 was initially operated 21 miles or more from the coast, but this was later dropped to only 4 miles, then fully overland, where they provided overland surveillance and supported Strike Coordination And Reconnaissance (SCAR). Although the CP-140 crews were not trained to this latter role, the CP-140's sensor, situational awareness and communication capabilities were greatly appreciated by the qualified Joint Terminal Attack Controllers (JTACs) who flew on-board directing these missions.[9] As the CP-140 had no self-protection, Intelligence assessments on Libyan anti-air capabilities and intents would certainly have been of deep interest to the crews.

Recent Named Operations

Although the CP-140 had taken minor[7] forays into military overland operations, and the CP-140/140M has always been capable of operations in the littoral (coastal) environment, the first significant overland military operation was Operation *Mobile*.[8] The standard deployment for a CP-140 to expect a high serviceability rate is a two-plane detachment,

DND photo/Operation *Impact*

An aircraft technician from Air Task Force – Iraq marshals a CP-140 *Aurora* long range patrol aircraft during Operation *Impact*, 8 April 2017.

The CP-140M's most significant operation overland began when a global coalition of 79 members formed in September 2014 to support Iraqi security forces in countering Daesh (otherwise known as ISIS or ISIL). To support Operation *Impact*, the CP-140M again deployed a 2-plane detachment flying out of Kuwait. The *Aurora* then flew in support of *Impact* from October 2014 until December 2017.[10] The basic mission was to provide support to the ISR Commander who directed about thirty UAVs and the CP-140M; the tasks were predictably UAV-like, coming from a common target deck that focused upon visual sensors. Although a valuable contribution to the coalition, these tasks did not well employ the many advanced capabilities of the CP-140M. Obtaining better value from the CP-140M in future complex roles may require national Command of ISR planning and analysis, with results fed out to allies (i.e. similar to various satellite capabilities or other advanced air breathing platforms). Unbelievably, the 3+ year Operation *Impact* deployment continuously took two- and-a-half operational crews, when the entire fleet's operational capacity comprised just five-to-six crews. With work-ups and leave following, many crewmembers were essentially deployed for years, with only short breaks at home.

As should be expected with this level of operational commitment, the operational squadrons soon required relief from the school and force development squadrons. Both *training upon*

> "As should be expected with this level of operational commitment, the operational squadrons soon required relief from the school and force development squadrons."

and *advancing* the new CP-140M capabilities in other missions/ roles was nearly impossible throughout this period and, with the fleet *near* (some think *past*) collapse, a significant effort called the CP-140M Get Well Program was initiated to rebuild the production of newly-qualified crew members and to regain experience and capability outside of Operation *Impact*. Nevertheless, a return to maritime operations *generally* and ASW *specifically* was profoundly required.

Not all CP-140M overland missions are related to war-fighting. During Operation *Impact*, and following the 2017 'double hits' of Hurricanes *Irma* and *Maria* in the Caribbean, 407 Squadron from 19 Wing Comox was tasked to provide rapid ISR support to the disaster recovery effort (although closer, 14 Wing Greenwood was in rotation with Operation *Impact*). Great Britain no longer had long-range ISR assets (having earlier disposed of their Hawker Siddeley *Nimrods*), and requested Canadian support in advance of their naval vessels arriving to assist their overseas territory of Turks and Caicos. CP-140M imagery was used by partner nations to assess and plan the response before arrival of the ships. The long patrol range allows basing outside the disaster area and limits demands upon strained logistics and infrastructure. Although ISR aircraft cannot assess the structural integrity of piers, bridges and buildings – they can see when critical infrastructure is seriously damaged, can tell if infrastructure such as airports and seaports are in use, can tell if roads are in use, see where displaced people are setting up camp (and thus need support), and so on. Quickly obtained, this form of information allows planners to develop a more rapid and effective response.[11,12]

The CP-140M also continues operations in the maritime and littoral (coastal) environments. ASW has seen a resurgence in importance and requests for Canadian participation. In addition to being continuously on call for the many roles previously listed (such as SAR and ASW) the CP-140M also regularly deploys for operations, such as Operation *Neon*, Operation *Caribbe* and Operation *Artemis*. Crews

Air Combat System Officers onboard a CP-140M *Aurora* patrol aircraft log in their observations during a reconnaissance mission conducted as part of Operation *Impact*, 1 January 2017.

Block 4 provides two aspects of capability that enhances performance of this mission. The EO/IR and radar remain unchanged. However, the new computers provided with the Block 4 upgrade allow change recognition between radar strip maps. If the crew imaged the flood area every hour or two and run change recognition, they can see what areas have become flooded in that short period. The crew could immediately see if an area of interest has become flooded between radar images and shift video there. If there are no critical areas recently flooded, the crews could then look at non-critical areas recently flooded to see if anyone is stranded on a road or on a roof. While EO/IR imagery is being gathered, or if the weather is too poor for EO/IR, radar can still be used to

Members of the Royal Canadian Air Force and the British Royal Air Force conduct operations out of Operation *Renaissance Irma-Maria* Task Force Headquarters at Grantley-Adams International Airport, Barbados, 17 September 2017.

also exercise internationally on joint warfighting exercises such as *Joint Warrior* and *Rim of the Pacific* (*Rimpac*). The results of the CP-140M Get Well Plan are bearing fruit with more trained operational crews each year, and all of whom have a much broader base of expertise.

Block 4

The Block 4 updates are not expected to change the broad mission sets of the CP-140M. Neither are these updates significantly changing sensor capabilities. What Block 4 will deliver is the ability to process and share information that until now used to be downloaded only after the aircraft landed. To provide a sense of what these updates mean in an operation, we will consider the CP-140M providing ISR oversight to a domestic flood (a contingency plan under Operation *Lentus*), such as the futuristic fictional account provided at the Introduction.

When the CP-140M has been called upon in the past, it has served to 'give eyes in the sky' to the Regional Joint Task Force (RJTF) Commander and whatever emergency measure organization which was being supported. The MX-20 EO/IR camera would be tasked to look at anything considered important and at risk by Command on the ground. When given no specific task, they looked up and down the flood zone seeking anyone needing help, or to identify unreported issues with infrastructure. As long as the support equipment was pre-positioned with Deployed Mission Support Center (DMSC) personnel, the video could be down-linked using Tactical Common Data Link (TCDL).

Corporal Mitchell Scott, an Airborne Electronic Sensors Operator (AESOP) on a CP-140 *Aurora* aircraft, launches a 53 D Sonobouy as part of a submarine hunting scenario during Exercise *Rimpac*, 24 July 2018.

Members from the 2ⁿᵈ Battalion, The Royal Canadian Regiment (2 RCR) conduct evacuations of local residents during Operation *Lentus* in Grand Bay-Westfield, New Brunswick, 25 April 2019.

track the progress of the flood waters, to see if traffic is still moving on at-risk roads, and so on. The high-speed satellite communication with Block 4 allows sharing of gathered information to end-users without the need to pre-position TCDL. Planners and analysts at any location could be reviewing this data and adjusting plans. It may be interesting to some that these same capabilities could be equally applied to other operations over land.

The aircraft itself has a specific capability without the associated support to provide advice on CP-140M employment, plan more effective operations, provide a conduit for Command and Control, do further analysis of collected data, and so on. The DMSC includes the components that allows mission data to be prepared and loaded onto a/the weapon system, systems to allow data replay and analysis, communications and computers (networks), and the personnel to do these associated activities. With this level of importance to the effectiveness of the weapons system, the DMSC should be pre-positioned when possible.

In this Operation *Lentus* flood scenario, (Introduction), the DMSC elements have significant roles. Network administrators ensure that required networks and satellite access is in place. Intelligence elements would liaise via the RJTF to determine what the local emergency measures sees as critical infrastructure within the flood zone. This listing of at-risk infrastructure would be provided to the crew to set priority for imaging, but crew performance will be faster if mission support enters these locations on a map overlay. Post mission reports and deeper analysis as required by the supported command may begin while the crew is still flying and continue 'round the clock'. Intelligence is usually named in the CJOC's Air Task Force (ATF) orders as the Release and Disclosure

Office, giving them the mandate to recommend what can be forwarded to the supported emergency measures organization, and how to declassify information for news release. Radar and EO/IR imagery from previous events and previous years' floods can be used to compare against the current operation. This information must be properly archived and curated for the present crews, and the database uploaded prior to their mission. The mission briefer must remain aware of what happens on the flood, and what are the changing Commander's objectives as the crews rest so they can be briefed before the next flight. This partial list begins to explain the role of CP-140M mission support in operations, but there are supports equally required beyond the fleet itself.

Block 4 and Beyond

Just as the CP-140M information may be used to enhance performance of the supported operation, data from other sources, such as satellite (i.e., Radar Sat Constellation and AIS Sats) can greatly enhance CP-140M effectiveness in some roles. In providing maritime surveillance for example, with Block 4 networking, the LRP crews may see the already-known national inputs derived from all other sources and focus upon filling in the blanks; potentially much more effective than repeating what is already known. More focused databases allow greater automation, more rapid identification/situational awareness and results in higher crew performance. The use of Coalition Shared Databases (CSDs) that allow metadata tagged searches between allies must be maintained for each operation and area. Proper analysis, archival, querying and rapid transmission of data in national and allied databases has become a significant enabler.

We have already discussed an example of a growing role for Intelligence in mission preparation in the flood scenario in liaising with other agencies to identify potential mission priorities (or requirements). There are other areas equally important and growing. As information may be sent to almost anyone in a networked world, two broad concepts must be well-understood. First, at times information must be provided rapidly to the supported force for operational reasons, and this type of information can be referred as time-sensitive and must be routed in the shortest possible method (i.e. the crew 'sending direct,' as with TCDL downlink, or a 'voice report today'). At other times, there is no immediate need, and deeper analysis should be conducted to ensure the correct picture is provided and this is context-sensitive information that should be well-considered before release (i.e. post-flight analysis to whatever degree required). Second, an understanding of the aspects of security (technical security, operational security, controlled goods concerns, and sometimes surveillance of Canadians concerns) must be very clearly communicated to the Operational Commander and to the Tactical Crew Commander. The ability to declassify products so they may be shared with supported allies and agencies can be a critical role to release both time-sensitive and context-sensitive data.

We already see the need for intelligence to gather and situate information to prepare the crew for operations, and this will continue. Additionally, in future, crews may request context or analysis during flight. Post mission, today we see intelligence conducting analysis on mission data and archival in national and allied databases. This deeper analysis includes tools at the MSC/DMSC, but also specialist facilities at the Acoustic Data Analysis Centre (ADAC), Electronic

> **"There are other areas equally important and growing. As information may be sent to almost anyone in a networked world, two broad concepts must be well-understood."**

Warfare Operational Support (EWOS) and the Canadian Forces Electronic Warfare Centre (CFEWC). With networked capabilities, critical aspects of analysis on high value targets could be completed even before the aircraft lands and is provided to allies. The need to grow analysis capabilities to new sensors is worthwhile to note. While specialists have long been established for acoustic and electronic warfare, our intelligence analysts were largely trained with respect to still imagery and Full-Motion Video (FMV) analysis through operations, including those in Afghanistan and Iraq. New sensors, such as those provided from space and advanced sensors on aircraft, such as the radar on the CP-140M, or hyper-spectral cameras, can see things impossible to routine imagery and must be better understood to be well-employed.

Associated with understanding how to analyze advanced capabilities is the need to properly task and employ them. As seen in Operation *Impact,* employing an advanced capability (with an older EO/IR turret), largely as a UAV, offers operational effect, but very limited when compared against alternative methods of employment. Looking for a vehicle with an EO/IR tool that can see a 100m x 100m square (or 0.01 square km) cannot compare with modes of radar that (employed in the right environment) can look at 10,000 square kilometres at a time. If Canada finds it difficult to effectively task complex capabilities, it is extremely unlikely that a coalition will do so. Depending upon the operation and theatre, it may be significantly more effective to maintain advanced capabilities (such as the CP-140M) under national Command and to execute the entire Tasking, Collection, Processing, Exploitation and Dissemination (TCPED) cycle.

DND photo

A CP-140 *Aurora* returns from its 100th combat mission over Iraq during Operation *Impact*, 23 February 2015.

The communication and computers folks, the "sixers,"[13] likewise have a growing role in the new world. None of the information we have described flowing back and forth moves without the network infrastructure. Classified networks are tightly controlled in terms of network design, physical security, user access, and etcetera. The networks on the aircraft are more restricted than normal networks, due to the fact that the aircraft and systems are also subject to aviation safety laws. The software systems are also antiquated, and many would have to be updated to still work after changes to associated systems. The aircraft can theoretically change its network architecture, but this would take significant time, cost and effort.

When the CP-140M architecture design was selected several years ago, the national network that had penetration to the many potential domestic Commanding and supporting agencies was (and is) the Consolidated Secret Network Infrastructure (CSNI). CSNI also offers many services and links (limited as they are) to the other most common networks. As with any large system that tries to do *everything* for *everybody*, it does have issues, such as responsiveness regarding establishing new connections, enabling new services, and support in an operational context. There is significant interest at the highest levels to establish a coherent and workable way ahead for the operational networks. These networks must allow flexibility for different operations at home and around the world, and for sharing information with allies and supported agencies. In a very broad sense, these networks will have to enable Command and Control (VOIP phones, internet chat, orders, and so on), passing of tactical data (Link-16, Link-11, and others) and passing of sensor data (FMV, radar imagery, still photos, metadata for some, and so on). This for every Canadian military capability. Whatever the architecture is eventually articulated, in the interim, the environmental Commanders, the bases and military capabilities address operational deficiencies as they arise.

In a large sense, the MSC/DMSC is the CP-140M's connection to the network world (barring line-of-sight radios and links). It is also the facility that allows mission data to be loaded on and off of proprietary aircraft systems (militarized drives, configuration files, and so on). Rapidly deployable, the DMSC can be 'fully up and running' within one day of the equipment and personnel arrival. Contracting for network access intra-theatre and back-haul to Canada can take some time unless theatre infrastructure is already in place. As back-up, the DMSC has its own satellite terminal, although busy theatres of operations may be so congested as to limit access to any network - whether satellite or terrestrial. In addition, some military scenarios see loss of network access. As a result, the DMSC must be able to operate autonomously and retain the flexibility to support the CP-140M on its own, or to establish network links in-theatre. Once the back-haul link is in place, CSNI, or a potential follow-on, may be able to deliver some of the required services (if connected to the theatre network in use).

At delivery, a Block 4 aircraft is connected directly to the MSC or DMSC local network (or enclave). The MSC and DMSC enclaves have a primary connection to the CSNI domain widely used for Canadian operations and which provides some basic access to allied networks. They also allow a separate connection with respect to another local network to a second domain - as when working with allies. This second domain does not touch the primary CNSI domain and to get information from the aircraft to the crew requires human intervention at the MSC/DMSC. Today, this could mean an extra operator on the ground reading command chat rooms and new mission orders and reports, and manually moving this information to the primary domain to send to the crew (for example, retyping chat messages, or burning files to a CD to move), and vice versa.

A repeated topic is the need to transfer information from the aircraft to the supported Commander and vice-versa. Full connections between even the closest allied national networks is not expected, for many compelling reasons. Rather, a new domain is established for a specific purpose, and the chosen allies would be allowed inside. Another option is to have a form of information gateway that allows only permitted information to leave or come into the separate networks. Both of these options are commonly employed. For the CP-140M, due to the conjunction of both aviation and network rules and the difficulty to change the aircraft weapon system, the aircraft is not expected to be able to join a new domain for each exercise and operation.[14] Some ability to have information to bridge the network is required. Therefore, I will refer to this capability generically as a gateway. Today CSNI offers gateways for some data to some allied nets (usually chat, email, web browsing). As already discussed, a network link back to Ottawa cannot be guaranteed, and if the required gateway is not in place, a person sits and types messages back and forth.

Perhaps the most interesting project today related to the CP-140M is within ADM(IM). The group that delivered the CAF the Next Gen Data Centres has another project at the pilot phase. The new CDIE project is looking to simplify Base (including MSC and DMSC) infrastructure to work on multiple nets of the same level of classification. These would all operate in virtual machines in one server, and be accessed within virtual machines on one client. One terminal with a window for each network. An option for the subsequent phase is to enable cross-domain data. If chosen as the next goal and implemented considering the need of the CP-140M, it would enable the DMSC to set up a gateway between the aircraft network and the supported Command. It would also enable CP-140M participation in exercises on BICES or CFXNET, and let us rapidly migrate data and operations to any newly-selected national network. I expect this would equally be lauded by any often deployed military capability.

> **"Full connections between even the closest allied national networks is not expected, for many compelling reasons."**

To conduct operational testing on the CP-140M, educate on what it can do, and how it needs to do it, gather attention and support to important projects, such as the CDIE and Joint ISR Battle Lab; the CP-140M is planned to participate in *Bold Quest* '21 as a network exercise with the MSC, and subsequently, for the aircraft to participate in *Bold Quest* '22. If operational exigencies require a change in plans, the fleet may participate in the Unified Vision event, or the *Coalition Warrior* Interoperability Exercise. A capability brief will be provided to CJOC and updated with suggested employment in different Operation and Contingency plans.

Conclusion

The Lockheed CP-140 *Aurora* has proved to be a noble and very versatile warrior in Canadian service. Furthermore, by virtue of astute anticipation and planning, Canada's venerable maritime patrol aircraft, focused initially upon anti-submarine warfare, has successfully morphed into a formidable asset in myriad ancillary roles. By virtue of a timely change in operational employments, astute and viable modernization updates, Canada's venerable aerial warrior has been assured of a viable and contributive operational life for many years to come.

CMJ

DND photo by S2 Jeremy W. Morris, 14 Wing Imaging

CP-140M Block 4 Tactical Station occupants Major Tardif, Major Fugger, Master-Corporal Fournier, and Master-Corporal Shepherd on duty, 7 December 2021.

NOTES

1. Wikipedia. (2020). Lockheed CP-140 Aurora. Retrieved from https://en.wikipedia.org/wiki/Lockheed_CP-140_Aurora

2. Perhaps unfortunate as the fleet was almost cancelled in the mid-2000s, in the middle of the Block 2 upgrades. The fleet was preserved but cut to 10 from 18 (later boosted to 14). Many credit the preservation of the fleet with the shift overland. Had the cut come through, this would have mirrored the long-rued loss of the U.K. Nimrod aircraft, with the U.K. only now re-gaining a similar capability with the P-8.

3. Canada: Department of National Defence. (2020). Current operations list. Retrieved from https://www.canada.ca/en/department-national-defence/services/operations/military-operations/current-operations/list.html

4. Ibid.

5. Canada: Department of National Defence. (2018). Operation ARTEMIS. Retrieved from https://www.canada.ca/en/department-national-defence/services/operations/military-operations/current-operations/operation-artemis.html

6. Canada: Department of National Defence. (2018). Operation MARITIME GUARD. Retrieved from https://www.canada.ca/en/department-national-defence/services/military-history/history-heritage/past-operations/europe/maritime-guard.html

7. Examples of early overland operations include SAR, various domestic security tasks, photo mapping, demonstrations to CA and SOF at different venues, Vancouver Olympics, etc.

8. Canada: Department of National Defence. (2014). Operation MOBILE. Retrieved from https://www.canada.ca/en/department-national-defence/services/operations/military-operations/recently-completed/operation-mobile.html

9. Mayne, R. O. (2015). The Canadian experience: Op MOBILE. In K. P. Mueller (Ed.), Precision and purpose: Airpower in the libyan civil war (pp. 239-266). JSTOR: RAND Corporation. Retrieved from https://www.jstor.org/stable/10.7249/j.ctt16f-8d7x.15?seq=5#metadata_info_tab_contents

10. Canada: Department of National Defence. (2018). Operation IMPACT. Retrieved from https://www.canada.ca/en/department-national-defence/services/operations/military-operations/current-operations/operation-impact.html

11. Canada: Department of National Defence. (2017). Operation RENAISSANCE IRMA MARIA. Retrieved from https://www.canada.ca/en/department-national-defence/services/operations/military-operations/recently-completed/operation-renaissance-irma-maria.html

12. Bregg, C. D. (2017). CAF's aurora aircraft gathers aerial imagery in the caribbean to support hurricane relief. Retrieved from https://ml-fd.caf-fac.ca/en/2017/09/6683

13. "Sixers" from the continental staff system with 6 being communications. The group includes the military trades such as CELE and ATIS Tech as well as DND civilians and sometimes contractors.

14. There is a caveat to this statement in that the aircraft and MSC/DMSC each have the capability for a second domain that is separate from the primary domain. The important thing to note in this is that the crew could see this network, see orders, chat rooms, email, etc. But would be unable to get tactical data such as Link-16 or sensor data across.

Making Moral Decisions Under Stress: A Revised Model for Defence

by Deanna L. Messervey, Waylon H. Dean, Elizabeth A. Nelson, and Jennifer M. Peach

Deanna Messervey *completed a Ph.D in Social Sociology at Queen's University. Currently, she is a Defence Scientist at Director General Military Personnel Research and Analysis (DGMPRA), where she leads its ethics research program.*

Waylon H. Dean *is the Editor at DGMPRA. He holds a Bachelor of Humanities and has done graduate-level work in moral philosophy.*

Elizabeth Nelson *completed a Ph.D in Cognitive Psychology at the University of Ottawa, and is currently a Research Advisor within the Learning Branch of Employment and Social Development Canada.*

Jennifer Peach *completed a Ph.D is Social Psychology at the University of Waterloo, and a post-doctoral position at Defence Research and Development (DRDC) Toronto. She is currently a Defence Scientist at DGMPRA, where she works in the Personnel and Family Support domain.*

Introduction

I was thinking that I was going to die….Everything just slowed down. I'm seeing the pilot get hit and he rolls over…we just went right down and I could see the hand coming up of the co-pilot. We just missed this building. We're dodging the bullets, and you feel the bullets coming. Where we were sitting, there's an armour plating under the bottom. It was like you were lifting your feet going "What is that?" and then you realize you're being shot at. It was all slow motion. We didn't crash, thank goodness, but it was a hard enough landing that we were all jarred and we were all injured and the helicopter was destroyed. At that point there was instant relief until we realized that we were in the middle of a firefight. So we were not safe. I don't remember any pain at that time. It was just automatic. I didn't even think about it—you just grab your weapon, you 'unseatbelt', you get out.

~Anonymous Canadian soldier
recalling his experience in Afghanistan

DND photo TM02-2019-0050-0035 by Corporal François Charest

A Canadian helicopter door gunner keeping watch.

The Canadian soldier's experience of being shot down exemplifies the operational conditions under which military members must often make decisions, including ethical ones. Any model of ethical decision-making must account for the factors present in such settings, along with the factors present in non-operational ones. Accounting for operational factors was the driver behind the revision of the Defence Moral Decision-Making model (DMDM). While we preserved many of the constructs used in the original Defence Ethical Decision-Making model,[1] we incorporated recent findings on decision-making under stress, on the role of emotions and 'heat-of-the-moment' thinking, and on the influence of situational factors, such as anonymity, and individual factors, such as moral identity.[2]

The revised DMDM has also incorporated other important research conducted since the original model was developed in 1999. Psychologists have shown, for example, that most of our moral judgments are automatic and intuitive, rather than rational and deliberative. Research has shown that stress can compromise our ability to engage in rational decision-making. Visceral states—which are strong physiological influences, such as hunger, fear, sexual arousal, and anger—can push us to act unethically. Recent research has also shown that fairness and harm to others are only some of the values or foundations underlying our ethical decisions; loyalty to a peer group, for example, can also be a salient factor in our ethical decisions.[3]

Like the original Defence Ethical Decision-Making model, the purpose of the new DMDM is not to prescribe ethical and moral behaviour—i.e., to show military personnel how to solve moral dilemmas—but to describe the moral decision-making process and the factors that can affect it in order to develop training and education to counteract these ethical risk factors. After explaining the DMDM, this article looks at some of the ethical risk mitigation strategies that have grown out of its redevelopment.

Decision-Making and the Dual-Process Model of Cognition

The original Defence Ethical Decision-Making model was based on James Rest's four-component model of moral reasoning, which views moral behaviour as the result of a four-stage psychological process whereby individuals (1) recognize a moral issue, (2) make a moral judgment, (3) form a moral intent, and (4) perform a moral behaviour.[4] Ultimately, Rest saw ethical reasoning as a rational and deliberative process, and he had assumed that ethical reasoning was largely concerned with the justness or fairness of an action.

Three shifts occurred in moral psychology since the original model was developed. The first was Jonathan Haidt's research on moral foundations theory, which changed the way we look at ethical decision-making.[5] Haidt showed that we draw on several moral foundations, in addition to justice or fairness, when we make ethical judgments. The three other foundations are in-group loyalty, authority or respect, and purity or sanctity. In particular, the salience of loyalty and authority in our ethical decisions has important implications for ethical behaviour in a military context.[6] Defence personnel may feel the pull of obedience to moral principles in the *DND and CF Code of Values and Ethics* to be loyal to Canada, DND, and the Canadian Armed Forces (CAF). At the same time, they may feel a sense of loyalty to the members of their unit, which can be enhanced by the stressors of combat. Thus, military personnel may experience competing moral obligations, where their sense of loyalty may be as important in their ethical decisions as their concern for justice.[7] Indeed, CAF members are more willing to intervene than to report moral infractions as indicated by Human Dimensions of Operation survey data[8] and a recent messaging study.[9]

The second shift also sprung from Haidt's research. He argued that Rest's rationalist model of ethical decision-making did not account for most of our ethical judgments. Haidt contends that we make quick moral judgments before we engage in effortful moral reasoning—in other words, we make moral judgments without being aware of how we searched for information, weighed evidence, and reached a conclusion. According to him, we only engage in this type of moral reasoning *after* we have reached a moral judgment. Thus, the goal of most of our moral reasoning is not to reach a moral judgment, as Rest had claimed, but to rationalize our intuitive moral judgments *after* we have made them.[10]

The third shift informing the DMDM was the introduction of the dual-process model of cognition into research on ethical decision-making.[11] In the dual-process model, our conscious-level thinking—such as making deliberate judgments and overriding impulses—is called Type 2 processing.[12] Type 2 processing is uniquely human and is typically controlled, rational, and deliberate. Because it requires controlled attention and access to working-memory, Type 2 processing is slow and effortful. People are more likely to use Type 2 processing when they expect to justify their decisions to others, and when they have the time to consider all the options and choose the best one. The other form of thinking contained in the model is called Type 1 processing, which is an automatic, intuitive, 'nonconscious,' and effortless form of thinking that does not require working memory or controlled attention. According to Daniel Kahneman, its main function is to "…maintain and update a model of [our] personal world, which represents what is normal in it."[13] Type 1 is similar to the processing used by animals and typically correlated with implicit knowledge. Examples of Type 1 processing are noticing hostility in a person's voice, solving simple math problems, reading large clear words, and responding to an unexpected sound. As will be discussed later, Type 1 processing remains relatively intact under conditions of stress, whereas Type 2 processing is impaired by stress.[14]

> **"The Canadian soldier's experience of being shot down exemplifies the operational conditions under which military members must often make decisions, including ethical ones."**
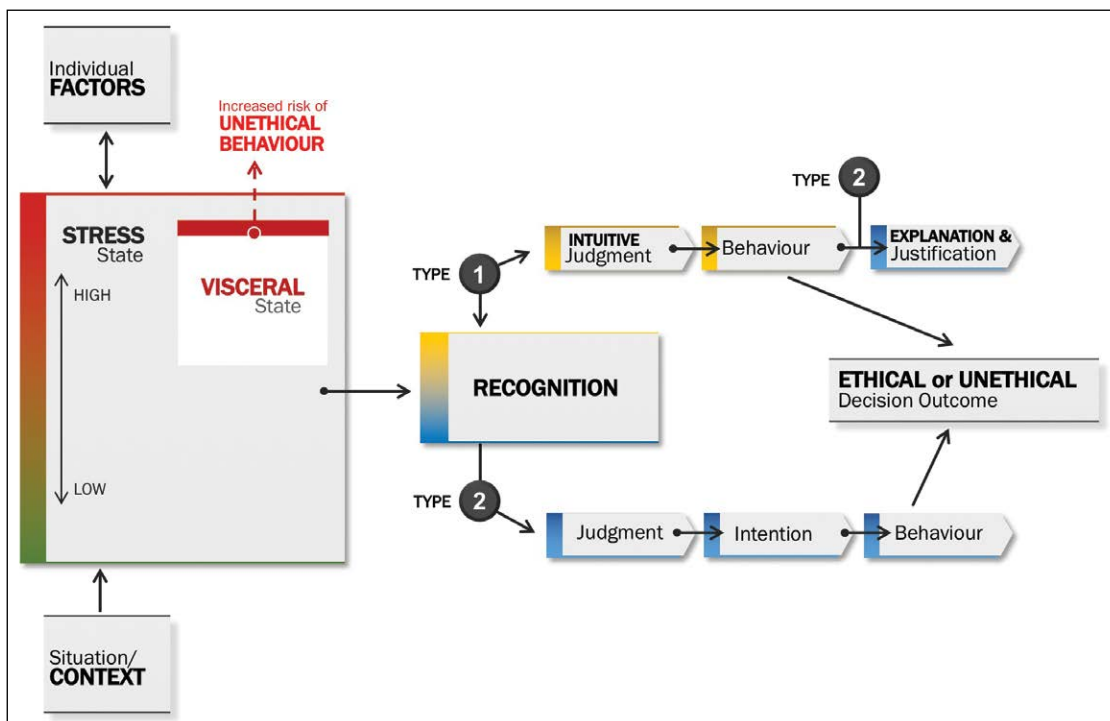
Figure 1: The revised Defence Moral Decision-Making Model.

In light of the research showing that many of our ethical decisions are intuitive, we used a dual-processing model of cognition to reframe the DMDM. As Figure 1 shows, sometimes we think about morally challenging situations using deliberative, rational, and effortful thinking in which we recognize a moral issue (see yellow-to-blue Recognition box), form a judgment (see blue Judgment box) that informs our intentions (see blue Intentions box), which may then influence our behaviour (see blue Behaviour box).

Most of the time, however, we form quick, intuitive judgments below our level of awareness.[15] Consistent with Haidt, when Type 1 processing occurs, recognition (see Recognition box) and intuitive judgment (see yellow Intuitive Judgment box) occur nearly at the same time and below our level of awareness. Then we engage in ethical or unethical behaviour (see yellow Behaviour box). When asked why we did something, we think up post hoc explanations of our behaviour because, when we make intuitive judgments, we generally do not have access to why we engaged in a particular behaviour.

It is important to note that both Type 1 and Type 2 thinking can lead to ethical or unethical decisions—automatic decisions are not necessarily unethical and deliberative decisions are not necessarily ethical. Consider the following scenario: An individual with high intelligence (an individual factor) who has a lot of autonomy (a situational factor) commits fraud. This person may experience low levels of stress (as represented by the lower, green end of the Stress State box), no visceral influences (i.e., an absence of visceral states), and engage in deliberative Type 2 thinking (as represented by the blue boxes). The DMDM is intended to capture these decisions as well.

The next section discusses the influence of stressors, visceral states, and contextual factors on ethical or unethical decision-making.

The Influence of Stressors and Visceral States on Ethical Decision-Making

Extreme stress can affect our perception of a situation. Not only can it cause tunnel vision, impaired hearing, and make events appear to be moving in slow motion, but it also compromises our ability to engage in the Type 2 processing required for deliberative ethical decision-making.[16] The more stress people experience, the more likely they will engage in Type 1 processing. Stressors are subjective, however, so individuals respond to them differently. Nonetheless, research shows that stressful situations can impair the types of memory and attention required for Type 2 processing. Moreover, experiments have shown the direct influence of stress on ethical decision-making, such as acting more selfishly when experiencing time pressure[17] and cheating more when we are tired.[18]

Visceral states are strong physiological influences (see Visceral State box) like anger, disgust, sexual arousal, thirst, and hunger.[19] Visceral states can increase the risk of unethical behaviour because they can lead to heat-of-the-moment thinking, where we are tempted to satisfy our immediate desires at the expense of our long-term goals. Research has shown that visceral influences predict selfish behaviour and dishonesty.[20] Even when we are hungry, for example, objects in the environment associated with food, as well as the drive state of hunger itself, occupy a disproportionately large amount of our attention. Military personnel can be exposed to various types of visceral influences and stress, including fatigue, hunger, extreme temperature, time pressure, pain, fear of dying, and the fear of seeing fellow personnel killed in action. When our

> **"Visceral states are strong physiological influences (see Visceral State box) like anger, disgust, sexual arousal, thirst, and hunger."**

Type 2 processing is compromised by stress and we experience a powerful visceral influence (such as anger over the death of a fellow soldier), we can experience the kind of 'heat-of-the-moment' thinking that can increase the risk of unethical behaviour. In the DMDM, visceral states are a subset of stress states.

Visceral States and Unethical Behaviour

Anger, a powerful visceral state, was salient in several high-profile cases of unethical behaviour by military personnel.[21] UK soldiers unlawfully killed a detainee after a rumour circulated that the detainee had murdered British personnel. Similarly, U.S. Marines killed unarmed non-combatants in Haditha after an improvised explosive device killed one of their members, Miguel Terrazas. A fellow Marine who was injured in the blast that killed Terrazas remarked, "I can understand because we are pretty much like one family, and when your teammates do get injured and killed, you are going to get pissed off and just rage."[22]

Empirical research backs up the evidence from case studies. U.S. studies have shown that service personnel who felt angry were more likely than those who did not to kick and hit non-combatants, verbally abuse non-combatants, and unnecessarily damage property.[23] Among veterans of Iraq and Afghanistan, anger was related to threatening violence and being involved in a fight.[24] In experiments, triggering anger caused an increase in unethical actions, including deceiving others for personal gain.[25] Taken together, there is a strong link between anger and unethical conduct among current and former military personnel.[26]

Disgust is another visceral response to morally challenging situations that can occur during military operations.[27] Feeling disgust toward a group of people is related to seeing them as less than human, which means the person who feels disgust is less likely to believe that the principles that apply to humanity apply to that group. Nick Haslam has identified two ways we dehumanize others: animalistic dehumanization (i.e., representing people in a manner akin to animals) and mechanistic dehumanization (i.e., representing people as objects). Disgust is key to animalistic dehumanization, and the animalistic dehumanizing of others increases the risk of unethical behaviour.[28]

Fatigue is another visceral response commonly experienced by military members that has been linked to unethical conduct.[29] In one study, extremely sleep-deprived Norwegian military students were expecting to fire on non-human dummies as part of a training exercise. When targets unexpectedly turned out to be real people, 59% of students fired their weapons (which had been disabled for the study) in response to an order when doing so violated international law.[30]

No doubt, incidents of unethical conduct are rare among Western military personnel. But the severity of the consequences compels us to investigate the factors that contribute to them and to develop countermeasures. In the revised DMDM, stress and visceral states have been placed to the left of the individual's interpretation of an ethical event (see Figure 1) because both will affect an individual's interpretation of an event.

Situational and Individual Factors and Ethical Decision-Making

Several individual and situational factors can influence ethical decision-making (see the first block in the revised DMDM, leftmost in Figure 1, for Individual Factors box and Situational/Context box). Individual factors are our "biological or psychological needs, values, goals, abilities, or personality."[31] Two important individual factors for ethical decision-making are moral identity and trait self-control.

Moral identity—the extent to which an individual's self-concept values moral traits—is an individual factor that research has shown to be related to ethical behaviour.[32] People high in moral identity rely less on Type 2 processing than people low on moral identity to make decisions consistent with their ethical beliefs.[33]

Self-control is another essential individual factor in ethical decision-making because recent research has shown that impulses alone do not cause unethical behaviour; lack of self-control causes unethical behaviour.[34] Self-control refers to our ability to inhibit unwanted "behavioural tendencies (such as impulses) and refrain from acting on them."[35] It involves overriding our immediate desires and impulses to act in accordance with our long-term goals and interests. Master Warrant Officer David Shultz, a Star of Military Valour recipient, describes how he controlled his emotions even though he was filled with rage after Corporal Mike Starker was killed in an ambush in Afghanistan on 6 May 2008:

> Corporal Starker had been wounded very badly and we moved him out of the direct line of the impact zone…and then went back in. By then you're seeing absolute red. When we went back to the FOB [forward operating base] and the medical officer…pronounced Mike as being killed in action, again I was filled with rage, I was filled with hate—I was ready to go absolutely berserk.…But you can't just go out and start shooting everybody because you had a TIC [troops in contact] the previous day. When you're a commander of a platoon or a patrol you have to set the example, set the standard, and show that you're in control of your emotions. Your weapon is clean and ready to go. All your gear is working. You're leading guys back into harm's way but you're going to be professional about it.[36]

As a personality trait, low self-control has been found to predict interpersonal violence and criminal behaviour.[37] It is worth noting that self-control can be a state that varies within the same individual, which means that certain conditions can foster self-control.

Situational factors, by contrast, are external forces that affect our appraisal of an ethical event and our reaction to it.[38] A considerable amount of research shows that the contexts in which we make ethical decisions affect the decisions we make. We are more likely to cheat when money is present,[39] for example, and more likely to hurt someone when we feel anonymous.[40] Anonymity is an important situational factor for military personnel because it can be salient on operations, such as when soldiers wear camouflage, or when sailors spend the night in a foreign port. Alcohol can also increase a sense of anonymity and can decrease self-control.[41]

> **"As a personality trait, low self-control has been found to predict interpersonal violence and criminal behaviour."**

An important situational factor is a lack of clear rules, which can increase unethical behaviour.[42] To address this issue, the Law of Armed Conflict, the *National Defence Act*, the CAF's rules of engagement, and the Queen's Regulations and Orders (QR&O), contain clear rules about unacceptable behaviour, including unethical behaviour. QR&O 19.015 states, for example, "Every officer and non-commissioned member shall obey lawful commands and orders of a superior officer." Military organizations, including the CAF, take steps to establish clear rules. At the tactical level, however, it is important for leaders to ensure rules and expectations remain clear.

We are also strongly influenced by our perceptions of what most people would do in a particular situation. In other words, we are influenced by norms, which are our group's formal and informal rules of conduct. Perceptions of what others approve and disapprove of predicted rates of littering, for example, and whether people paid their taxes. Pressure to not report other military members' transgressions or to engage in misconduct increased unethical behaviour.[43]

Ethical leadership is another important situational influence. Recent research with CAF members has found that ethical leaders encourage ethical behaviour among their subordinates. When ethical leadership is combined with co-worker ethicality (i.e., a situational factor)[44] and moral identity (an individual factor),[45] it is associated with higher levels of ethical behaviour from followers. One of the reasons leadership is associated with lower levels of unethical behaviour is that leaders decrease the likelihood of their followers using psychological manoeuvers that enable them to still feel good about themselves when they violate moral standards.[46]

Leaders thus have an important role in shaping an organization's ethical culture. In addition to modelling ethical behaviour, other aspects of ethical culture that influence ethical behaviour are commitment from leaders and employees to act ethically, to be transparent, to be open to discussing ethically challenging situations, and to discipline personnel who violate ethical standards. Leaders can also ensure that personnel have sufficient time, authority, information, and resources (i.e., money, equipment)

to act ethically.[47] The Chief of the Defence Staff's *Guidance to Commanding Officers* already discusses the importance of leaders creating the conditions for open discussion of ethical issues.

The interaction between situational and individual factors shapes how a person interprets and reacts to an ethical event. A situation may introduce stressors (i.e., combat) and visceral influences (i.e., anger over seeing a friend killed in action) that compromise an individual's ability to think rationally. Uncertainty about the effect of one's actions, combined with the surrounding ethical culture may further influence an individual's behaviour. At the same time, we are not wholly determined by our environment. Some of the individual factors that define a person—i.e., one's level of moral identity or level of self-control—can counterbalance the effects of a situation.

Strategies for Minimizing Ethical Risk

The purpose of the DMDM is to describe our moral decision-making process and the individual and situational factors that affect it, so we can develop strategies to make ethical decision-making more robust against these risk factors. In different terms, we attempt to identify the pressure points likely to affect the ethical decisions of military personnel. To get a clearer picture of where these points are and how we propose to mitigate them, consider how the following scenario maps onto the DMDM: A soldier with low self-control (an individual factor) sees a fellow soldier killed in action (a situational factor). The soldier experiences high levels of stress (the Stress State box) and extreme anger (the Visceral State box), leading to automatic processing (Type 1,

> **"Realistic ethics training, in which defence personnel practice acting with integrity under challenging conditions, may better prepare personnel for real-world conditions…"**

yellow boxes) and putting the soldier at high risk of unethical behaviour. The DMDM was redeveloped to inform strategies that target both Type 1 and Type 2 processing and the factors that affect them. In what follows, we outline how realistic training can reinforce classroom-based training and some strategies for mitigating ethical risk.

Classroom-based ethics training. Traditional ethics training—i.e., classroom training in ethical decision-making—can increase knowledge and awareness of ethical issues.[48] As such, classroom-based ethics training can help prepare defence personnel for making decisions by helping them determine what they ought to do in a particular situation. The CAF's Unit Ethics Coordinators and chaplains also have key roles to play in raising awareness of ethical issues and advising commanders.

Train as you fight. Militaries have long recognized that skills requiring a great deal of controlled attention (such as assembling and dismantling a weapon) can become automatic with repeated training. Militaries have also long known that realistic training—or what is often called the "train as we intend to fight" approach to training—can help personnel handle stressful situations by exposing them to milder stressors during training, and then gradually increasing the intensity of the stressors as training continues.[49] Militaries therefore have long experience transforming Type 2 into Type 1 processing, such as when soldiers are over-trained to respond automatically to effective enemy fire. It follows that one strategy for mitigating ethical risk is to incorporate realistic ethics training whenever possible.[50]

Realistic ethics training, in which defence personnel practice acting with integrity under challenging conditions, may better prepare personnel for real-world situations where rational thinking is compromised by stressors and 'heat-of-the-moment' thinking.[51] Training Defence personnel to react with appropriate responses in such situations may be one way to diminish their effects upon individuals. In practice, traditional ethics education conducted in a classroom could be

DND photo by Corporal David Veldman

followed by a series of novel and increasingly stressful problems presented to students under the stress of a field exercise, followed by a debrief with students to consolidate their learning. Practicing acting with integrity in real-world situations may better prepare personnel to act ethically and morally in situations where doing the right thing is challenging. If realistic ethics training is not feasible, we recommend that practitioners encourage personnel to think about what they would do in real-world situations. Mary Gentile suggests asking personnel to think about what they would *actually do* rather than what they *should do* when confronted with a morally challenging situation.[52]

Self-awareness. While anonymity can increase unethical behaviour, self-awareness can improve ethical behaviour. Researchers have found that seeing one's reflection in a mirror has various behavioural consequences, including making us more likely to act in accordance with our standards and moral values. Thus, leaders can increase members' self-awareness in high-risk situations (i.e., when soldiers are wearing camouflage) by saying an individuals' name, improving lighting, or by having them look in a mirror.[53]

Ethical leadership. Given the importance of leadership in fostering an ethical culture, leaders can set an example of appropriate behaviour and can shape the behaviour of their followers.[54] Leaders should also ensure they do not give ambiguous or vague orders.[55] To help personnel confront challenging and stressful situations, leaders can frame their direction using if-then statements (i.e., if situation X occurs, do action Y). For example, if someone spits in your face or if locals throw rocks at you, then focus on making your exhalations slower than your inhalations.[56]

Norms. One of the aims of the revised DMDM is to identify concrete and actionable strategies that defence personnel can use to promote ethical behaviour. In light of the importance of peer approval in shaping behaviour, tailoring communications about ethics in a way that emphasizes the rarity and unacceptability of unethical conduct is a strategy for reducing ethical risk. An oft-cited example of the power of setting norms comes from former Marine Corps officer Hays Parks, who related an incident from a second lieutenant in Vietnam. Moments after the young officer's first firefight,

> …he burst through a hedgerow, and standing to one side was one of his marine riflemen with his rifle at the head of an old woman. The lieutenant later said, "Frankly, I froze. I wasn't sure what to do. I didn't know what to say." About that time his gunnery sergeant came through the hedgerow right behind him and said very quickly, "Knock it off! Marines don't do that." He said that set the tone for the conduct of that unit from that time on.[57]

Statements like "Marines don't do that" are an effective way to convey what the group considers expected standards.

Ethical reminders. Receiving ethical reminders at key points in the decision-making process can help mitigate the effects of situational factors. Being reminded of one's institutional honours and one's ethical and religious standards at the time of

decision-making have been found to reduce unethical behaviour.[58] Accordingly, leaders and peers may wish to remind personnel of the importance of maintaining ethical standards when defence personnel are exposed to conditions that can increase ethical risk.

Conclusion

The revised DMDM model recognizes that ethical attitudes and values do not always lead to ethical outcomes because situational factors and individual differences have a profound influence on ethical behaviour. Military personnel often face the kinds of situations that research shows have the strongest influence on reflective and deliberative decision-making. Combat, for example, is typified by extreme stressors (i.e., being shot at), and the potential for visceral influences (i.e., seeing a peer killed in action), both of which can compromise an individual's ability to make rational ethical decisions. The CAF and DND can use the DMDM to inform ways of counteracting the effects of situational and individual factors to foster ethical behaviour in defence. The DMDM suggests that realistic ethics training, classroom-based training, self-awareness, ethical leadership, maintenance of social norms, and ethical reminders can counteract the effects of situation and individual factors.

CMJ

DND photo AS01-2016-0016-004 by Master-Corporal Louis Brunet

NOTES

1 E.K. Kelloway *et al.*, *Ethical Decision-Making in DND: The Development of a Measurement Instrument, Baseline Assessment of Ethical Values in DND, Phase 1*, Sponsor Research Report 99-14 (Ottawa, ON: Directorate Human Resources Research and Evaluation, 1999).

2 The research cited and discussed in this paper can be found in the following sources: D.L. Messervey and E.C. Squires, "An Evidenced-Based Approach to Understanding How Leaders can Foster Ethical Behaviour," in *Adaptive Leadership in the Military Context: International Perspectives*, edited by D. Lindsay and D. Woycheshin, 61-80 (Kingston, ON: Canadian Defence Academy Press, 2014); "How Leaders can Foster Ethical Behaviour," in International Perspectives on Military Leadership, edited by D. Lindsay, D. Watola, and D. Woycheshin. 111–26 (Winnipeg, MB: Canadian Armed Forces, 17 Wing Winnipeg Publishing Office, 2018); Messervey and J. Peach, "Battlefield Ethics: What Influences Ethical Behaviour on Operations?" in *The Human Dimensions of Operations: A Personnel Research Perspective*, edited by G. Ivey, K. Sudom, W. Dean, and M. Tremblay, 83-101 (Kingston, ON: Canadian Defence Academy Press, 2015); Messervey and K. Davis, "Mitigating the Ethical Risk of Sexual Misconduct in Organizations," in *Military Operations and the Mind: War Ethics and Solders' Well-Being*, edited by S. Belanger and D. Lagace-Roy, 209–32 (Montreal: McGill-Queen's University Press, 2016); Messervey, Peach, W.H. Dean, and E. Nelson, "Train as You Fight: A Heat-of-the-Moment Moral Decision-Making Model" (unpublished manuscript, November 1, 2019); Messervey, "The Ethical Risk Checklist," Director General Military Personnel Research and Analysis Scientific Report (manuscript in preparation, November 5, 2019).

3 See J. Haidt, "The New Synthesis in Moral Psychology," in *Science* 316, No. 5827 (2007), pp. 998–1002.

4 J.R. Rest, *Moral Development: Advances in Research and Theory* (New York: Praeger, 1986).

5 For an overview of Haidt's research see "New Synthesis," pp. 998–1002.

6 D.L. Messervey, *What Drives Moral Attitudes and Behaviour?* Director General Military Personnel Research and Analysis Technical Report 2013-003 (Ottawa, ON: Defence Research and Development Canada, 2013).

7 D. Winslow, *The Canadian Airborne in Somalia: A Socio-Cultural Inquiry*, Study Prepared for the Commission of Inquiry into the Deployment of Canadian Forces to Somalia (Ottawa, ON: Public Works and Government Services, 1997).

8 M.E. Therrien and D.L. Messervey, *Ethical Attitudes and Intentions on the Battlefield: Empirical Evidence from the Human Dimensions of Operations Survey*, Director General Military Personnel Research and Analysis Scientific Report DRDC-RDDC-2019-R185 (Ottawa, ON: Defence Research and Development Canada, 2019).

9   G.T. Howell and D.L. Messervey, "Personality and Perceptions of Communal Sharing Influence Military Members' Decisions to Approach but not Report a Teammate that Behaved Unethically," Director General Military Personnel Research and Analysis (manuscript under review).

10 J. Haidt, "The Emotional Dog and its Rational Tail: A Social Intuitionist Approach to Moral Judgment," in *Psychological Review* 108, No. 4 (2001), pp. 814–834, 818.

11 For the research on the neurocognitive perspective on ethical decision-making, please refer to E. Nelson, J. Schoenherr, D.L. Messervey, and W.H. Dean, *Using Neuroscience to Investigate Ethical Decision Making Under Stress*, Director General Military Personnel Research and Analysis Scientific Report DRDC-RDDC-2018-R229 (Ottawa, ON: Defence Research and Development Canada, 2018).

12 K.E. Stanovich and J. St. B.T. Evans have "discontinued and discouraged the use of the labels System 1 and 2" and instead recommend using the terms Type 1 and Type 2. Accordingly, we use the terms Type 1 and Type 2 to refer to dual-processing; see "Dual-Process Theories of Higher Cognition: Advancing the Debate," in *Perspectives on Psychological Science* 8, No. 3 (2013), pp. 223–241.

13 D. Kahneman, *Thinking, Fast and Slow* (New York: Farrar, Straus and Giroux, 2011), p.71.

14 In the DMDM model, we adopt Sapolsky's approach that the stress-response can be caused by physiological or psychological factors. A stressor is defined as anything external that causes an imbalance in an individual's internal equilibrium.

15 J. Haidt, "The Emotional Dog and its Rational Tail: A Social Intuitionist Approach to Moral Judgment," in *Psychological Review* 108, No. 4 (2001), pp. 814–834.

16 For the research on stressors, visceral states, and decision making, see sources in notes 2 and 8.

17 S. Shalvi, O. Eldar, and Y. Bereby-Meyer, "Honesty Requires Time (and Lack of Justifications)," in *Psychological Science* 23, No. 10 (2012), 1264–1270.

18 C.M. Barnes *et al*., "Lack of Sleep and Unethical Conduct," in *Organizational Behavior and Human Decision Processes* 115 (2011), pp. 169–180.

19 G. Loewenstein, "Out of Control: Visceral Influences on Behavior," in *Organizational Behaviour and Human Decision Processes* 65, No. 3 (1996), pp. 272–292.

20 E. F. Williams *et al*., "The Valjean effect: Visceral States and Cheating," in *Emotion* 16, No. 6 (2016), pp. 897–902.

21 Documents related to the Baha Mousa Public Inquiry can be found at http://webarchive.nationalarchives.gov.uk/20120215203912/http://www.bahamousainquiry.org/index.htm. Revenge also may have motivated the My Lai 4 massacre; see H.C. Kelman and V.L. Hamilton, *Crimes of Obedience* (New Haven: Yale U. P., 1989), p. 3.

22 M. Duffy, T. McGirk, and B. Ghosh, "The Ghosts of Haditha," in *Time* 167, No. 24 (4 June 2006), pp. 26–35.

23 Mental Health Advisory Team (MHAT-IV). *Operation Iraqi Freedom* 05–07 (2006). Retrieved from http://www.armymedicine.army.mil/reports/mhat/mhat_iv/mhat-iv.cfm

24 J.C. Hellmuth *et al*., "Modeling PTSD Symptom Clusters, Alcohol Misuse, Anger, And Depression as they Relate to Aggression and Suicidality in Returning US Veterans," in *Journal of Traumatic Stress* 25, No. 5 (2012), pp. 527–534.

25 D. Motro *et al*., "Investigating the Effects of Anger and Guilt on Unethical Behavior: A Dual-Process Approach," in *Journal of Business Ethics* 152, No. 1 (2016), pp. 133–148.

26 J.-R.S. Blanc *et al*., "Association between Unethical Battlefield Conduct and Mental Health: Implications for Leaders and Ethical Risk Assessments," in *Psychology of Violence* 8, No. 2 (2018), pp. 250–258.

27 For research on the link between disgust and unethical behaviour, see Messervey, "The Ethical Risk Checklist."

28 N. Haslam, "Dehumanization: An Integrative Review," in *Personality and Social Psychology Review* 10, No. 3 (2006), pp. 252–264.

29 Barnes *et al*, "Lack of Sleep and Unethical Conduct," pp. 169–180.

30 R.P. Larsen, "Decision-Making by Military Students under Severe Stress," in *Military Psychology* 13, No. 2 (2001), pp. 89–98.

31 D.M. Cable and J.R. Edwards, "Complementary and Supplementary Fit: A Theoretical and Empirical Integration," in *Journal of Applied Psychology* 89, No. 5 (2004), pp. 822–834.

32 K. Aquino and A. Reed, "The Self-Importance of Moral Identity," in *Journal of Personality and Social Psychology* 83, No. 6 (2002), pp. 1423–1440.

33 F. Gino *et al*., "Unable to Resist Temptation: How Self-Control Depletion Promotes Unethical Behavior," in *Organizational Behavior and Human Decision Processes* 115, No. 2 (2011), pp. 191–203. J.D. Greene and J.M. Paxton, "Patterns of Neural Activity Associated with Honest and Dishonest Moral Decisions," in *Proceedings of the National Academy of Sciences* 106, No. 30 (2009), pp. 12506–12511.

34 For the research disgust and unethical behaviour see Messervey, "The Ethical Risk Checklist."

35 J.P. Tangney, R.F. Baumeister, and A.L. Boone, "High Self-Control Predicts Good Adjustment, Less Pathology, Better Grades, and Interpersonal Success," in *Journal of Personality* 72, No. 2 (2004), pp. 271–324, 274.

36 D. Shultz (MWO, Canadian Armed Forces), interviews with Deanna Messervey, Department of National Defence, Ottawa, ON, April 23 and 28, 2014.

37 D. Boisvert *et al*., "Genetic and Environmental Overlap Between Low Self-Control and Delinquency," in *Journal of Quantitative Criminology* 28, No. 3 (2012), pp. 477–507; K. Holtfreter *et al*., "Low Self-Control and Fraud Offending, Victimization, and Their Overlap," in *Criminal Justice and Behavior* 37, No. 2 (2010), pp.188–203.

38 R.J. Gerrig and P.G. Zimbardo, *Psychology and Life*, 16th ed. (Boston, MA: Allyn and Bacon, 2002). Retrieved from the American Psychological Association's website, at: http://www.apa.org/research/action/glossary.aspx

39 F. Gino and L. Pierce, "The Abundance Effect: Unethical Behaviour in the Presence Of Wealth," in *Organizational Behaviour and Human Decision Processes* 109, No. 2 (2009), pp. 142–155.

40 R.I. Watson, "Investigation into Deindividuation Using a Cross-Cultural Survey Technique," in *Journal of Personality and Social Psychology* 25, No. 3 (1973), pp. 342–345.

41 For research on the relation between unethical behaviour and money, anonymity, alcohol, and self-control, see Messervey, "The Ethical Risk Checklist."

42 M. Kaptein, "Developing and Testing a Measure for the Ethical Culture of Organizations: The Corporate Ethical Virtues Model," in *Journal of Organizational Behavior* 29, No. 7 (2008), pp. 923–947.

43 For research on the influence of norms, see Messervey, "The Ethical Risk Checklist," Director General Military Personnel Research and Analysis Scientific Report (manuscript in preparation,5 November 2019).

44 D.F. O'Keefe, D., Messervey, and E.C. Squires, "Promoting Ethical and Prosocial Behavior: The Combined Effect of Ethical Leadership and Coworker Ethicality," in *Ethics & Behavior* 28, No. 3 (2018), pp. 235–260.

45 D.F. O'Keefe, J.M. Peach, and D.L. Messervey, "The Combined Effect of Ethical Leadership, Moral Identity, and Organizational Identification on Workplace Behavior," in *Journal of Leadership Studies* 13, No. 1 (2019), pp. 20–35.

46 C. Moore *et al*., "Leaders Matter Morally: The Role of Ethical Leadership in Shaping Employee Moral Cognition and Misconduct," in *Journal of Applied Psychology* 104, No. 1 (2019), pp. 123–145.

47 M. Kaptein, "Developing and Testing a Measure for the Ethical Culture of Organizations: The Corporate Ethical Virtues Model," in *Journal of Organizational Behavior* 29, No. 7 (2008), pp. 923–947.

48 For research on the importance of classroom training, see, for example, L. N. Harkrider *et al*., "Structuring Case-Based Ethics Training: How Comparing Cases and Structured Prompts Influence Training Effectiveness," in *Ethics and Behavior* 23, No. 3 (2013), pp. 179–198.

49 See also D. Meichenbaum, *Stress Inoculation Training* (New York: Pergamon, 1985).

50 Messervey, *What Drives Moral Attitudes and Behaviour*?; Megan M. Thompson and Rakesh Jetly, "Battlefield Ethics Training: Integrating Ethical Scenarios in High-Intensity Military Field Exercises," in *European Journal of Psychotraumatology* 5, No. 1 (2014): 23668; Messervey and Peach, "Battlefield Ethics," 83-101.

51 Messervey, *What Drives Moral Attitudes and Behaviour*?

52 M.C. Gentile, *Giving Voice to Values: How to Speak Your Mind when You Know What's Right* (New Haven, CT: Yale U. P., 2010).

53 *Ibid.*

54 M.E. Brown, L. K. Treviño, and D.A. Harrison, "Ethical Leadership: A Social Learning Perspective for Construct Development and Testing," in *Organizational Behavior and Human Decision Processes*, 97 No. 2 (2005): pp. 117–134.

55 J.P. Bradley an S.P. Tymchuk, "Assessing and Managing Ethical Risk in Defence," in *Canadian Military Journal*, Vol.13, No. 4 (2013), pp. 6–16.

56 For more information on the calming effects of breathing, see R.M. Sapolsky, *Why Zebras Don't get Ulcers: The Acclaimed Guide to Stress, Stress-Related Diseases, and Coping* (New York: Henry Holt and Company, 2004).

57 W. Hays Park, Roundtable Remarks," in *Facing My Lai: Moving Beyond the Massacre*, ed. D. Anderson (Lawrence, KS: University of Kansas P. 1998), p. 129.

58 N. Mazar, O. Amir, and D. Ariely, "The Dishonesty of Honest People: A Theory of Self-Concept Maintenance," in *Journal of Marketing Research* XLV (December 2008), pp. 633–644.

US forces supported by a UH-1D *Huey* helicopter in action somewhere in South Vietnam, circa 1966.

Counterinsurgency and Hybrid Warfare in Vietnam

by Ismaël Fournier

Ismaël Fournier *is a former infantryman with the 3rd Battalion of the Royal 22nd Regiment, who deployed with them to Bosnia in 2001, and then to Kabul and Kandahar in Afghanistan in 2004 and 2007 respectively. Severely wounded in an IED explosion during the latter deployment, and after multiple restorative surgeries, Ismaël made a professional change to the military intelligence branch. Since then, he completed a baccalaureate, a master's degree, and a Ph.D. in History from Laval University. Leaving the armed forces in 2019, he is currently employed by the Department of National Defence as an analyst specializing in strategy and tactics related to insurgencies and counterinsurgencies.*

Introduction and Background

Since South Vietnam's collapse in 1975, most studies dedicated to the Vietnam War have painted a highly negative portrait of the US military's performance in Southeast Asia. Authors have frequently blamed the US Army for its tendency to favour conventional military tactics in a country deemed to be plagued by an insurgency. These same individuals have also widely criticized Military Assistance Command Vietnam's (MACV) counterinsurgency strategy against the Communist guerrillas. Several went even further by asserting that no form of counterinsurgency would have been applicable in Vietnam. These theories have been advanced by many writers, including Lewis Sorley, Drew Krepinevich, Douglas Porch and many others. However, these views were also challenged by others, like Mark Moyar, Max Boot and Gregory Daddis. This article goes against the classic views regarding the US military's "poor performance" in Vietnam, and suggests that US counterinsurgency initiatives were highly effective in the area, and went so far as to cause an unequivocal defeat of the Communist insurgency.

It will be further suggested that the execution of conventional military operations was in fact essential if US and South Vietnamese forces hoped to preserve the Republic of Vietnam (RVN). The overall analysis ultimately aims to demonstrate that the war was won by North Vietnam's regular army, and not by the Communist insurgency. During the war, Communist leaders in Hanoi exploited both insurgent and conventional warfare tactics with their regular soldiers of the North Vietnamese Army (NVA) and their guerrilla troops of the National Liberation Front, also known as the Vietcong. Such a *modus operandi* made Vietnam a hybrid warfare theatre. Too frequently, authors have neglected to explain the tactical reverberations that stemmed from Hanoi's hybrid strategy. The NVA, unlike the Vietcong, did not use asymmetric guerrilla tactics, preferring to exploit conventional military

doctrine. While the Vietcong was a guerilla force, some of its regiments also exploited conventional warfare tactics against the Army of the Republic of Vietnam (ARVN) and US forces. Such is the nature of hybrid warfare; military forces will be targeted via asymmetric and regular tactics simultaneously, which highly complicates the tactical situation on the battlefield. Confronted with both regular and asymmetric threats, MACV had no alternative but to carry out both conventional and counterinsurgency military operations, a task most modern armies would find extremely difficult, even today. Although it required several years of adjustments coupled with multiple setbacks, US and ARVN forces managed to neutralize the insurgency in 1972.

Following the Tet Offensive in 1968, the US-led Civil Operations and Revolutionary Development Support (CORDS) counterinsurgency program, as well as the Phoenix program, ultimately brought about the downfall of the Vietcong. CORDS operations were largely inspired by the US Marine Corps' (USMC) Combined Action Platoons (CAPs) concept. When the NVA took charge of military operations, its armies initiated major military offensives using classic mobile warfare supported by tanks and artillery, which led to their spring campaign in 1972, as well as the invasion that led to the fall of the RVN in 1975. MACV's alleged "flawed counterinsurgency" and "reliance" upon conventional warfare had absolutely nothing to do with the military outcome of the conflict. In order to better understand these dynamics, we will conduct an analysis of the USMC's counterinsurgency campaign, the effects of the CORDS and Phoenix programs on the insurgency, and the emergence of Vietnam as a conventional war theatre in 1972.

Discussion

Combined Action Platoons: The Marines' 'Hammer and Anvil' against the Vietcong

The Marines of the III Marine Amphibious Force (III MAF) were among the first combat troops deployed to the RVN. The III MAF was subordinated to MACV, which was led by General William Westmoreland in the South Vietnamese capital of Saigon. The USMC occupied the northern part of the country, near the demilitarized zone (DMZ) separating South and North Vietnam. The III MAF

commanding officer, General Lewis Walt, expressed his desire to minimize conventional 'search and destroy' missions against large Communist units in order to maximize counterinsurgency operations. Counter-guerrilla warfare has always been part of the Marines' DNA. From the late-19th Century to the Vietnam War, the USMC has seen its units deployed to multiple war zones plagued by insurgencies. Walt was a fervent defender of counterinsurgency and pacification tactics, which sought to gain the support of the civilian population. Although Westmoreland underlined that he adhered to the same principle, he pointed out that he did not have enough troops to carry out a program similar to that of the USMC across South Vietnam; conventional search and destroy operations were more of a priority for him.[1] When Westmoreland requested a massive US troop deployment from Washington in the summer of 1965, multiple ARVN battalions were being annihilated by Communist forces who were about to cut South Vietnam in half (see Figure 1).[2]
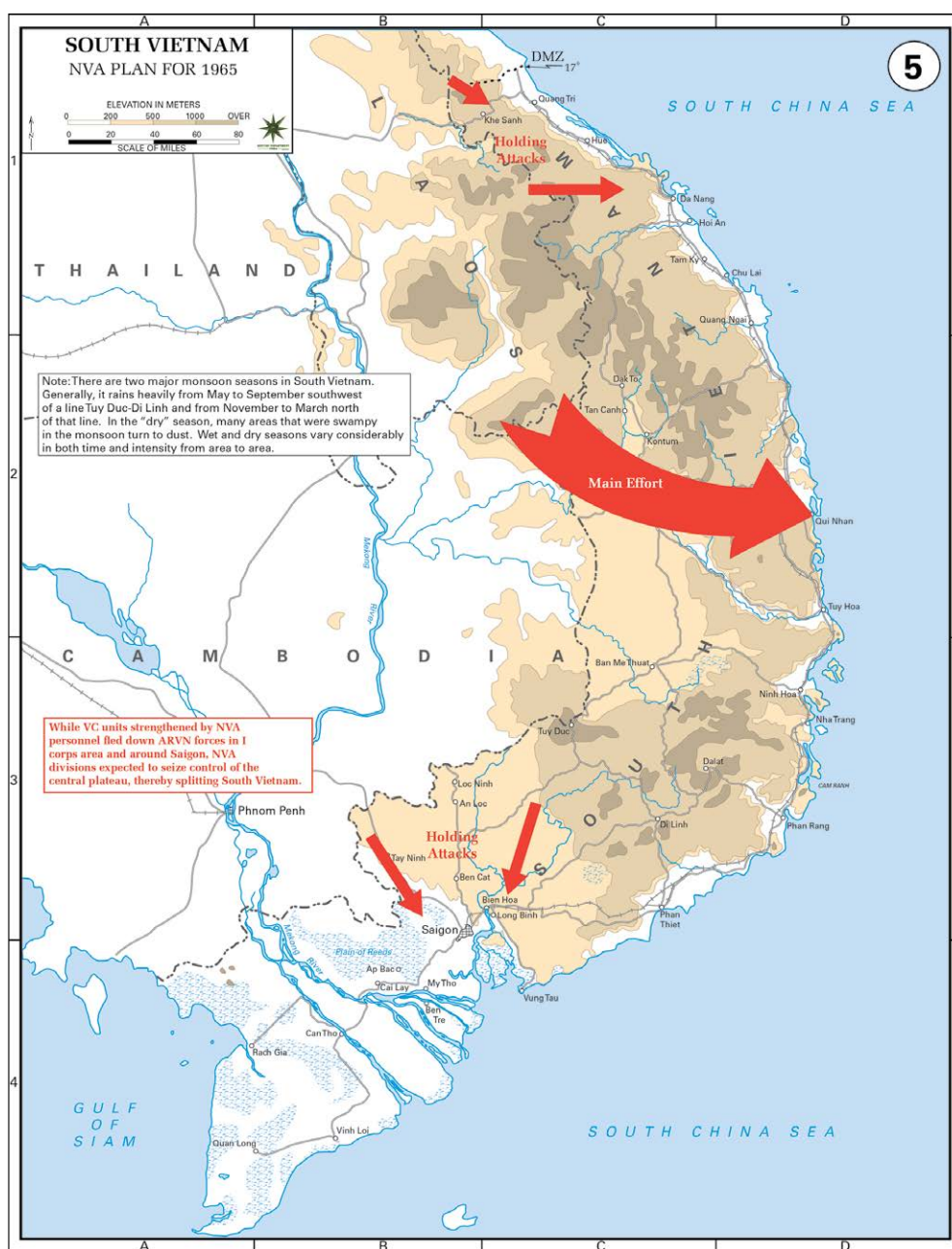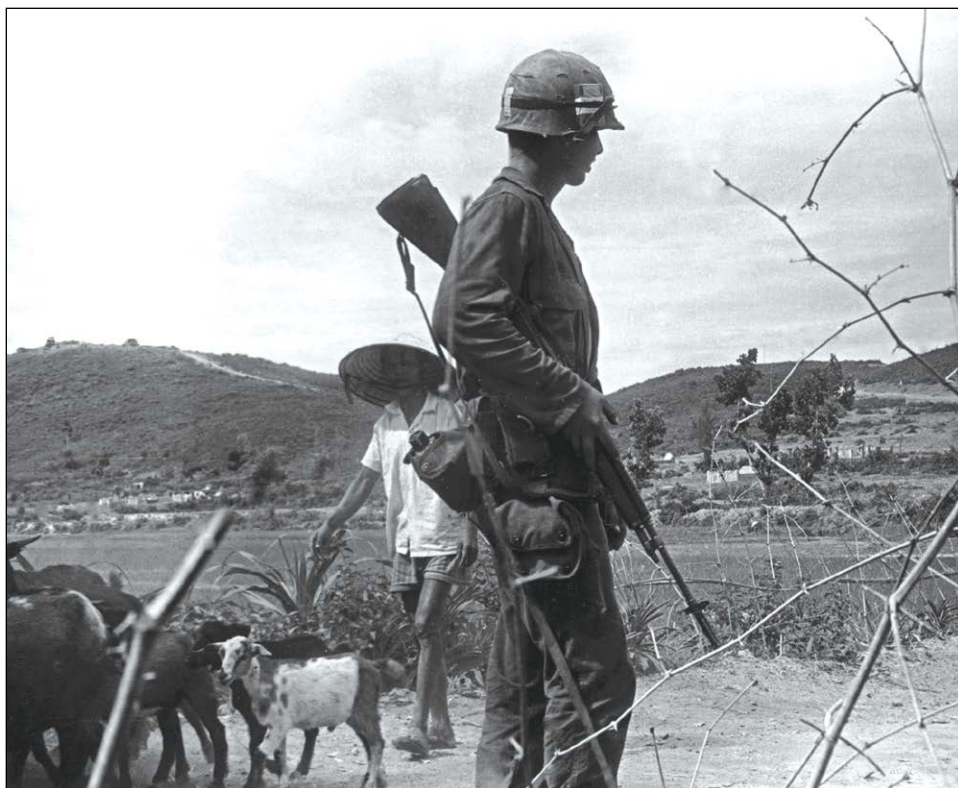

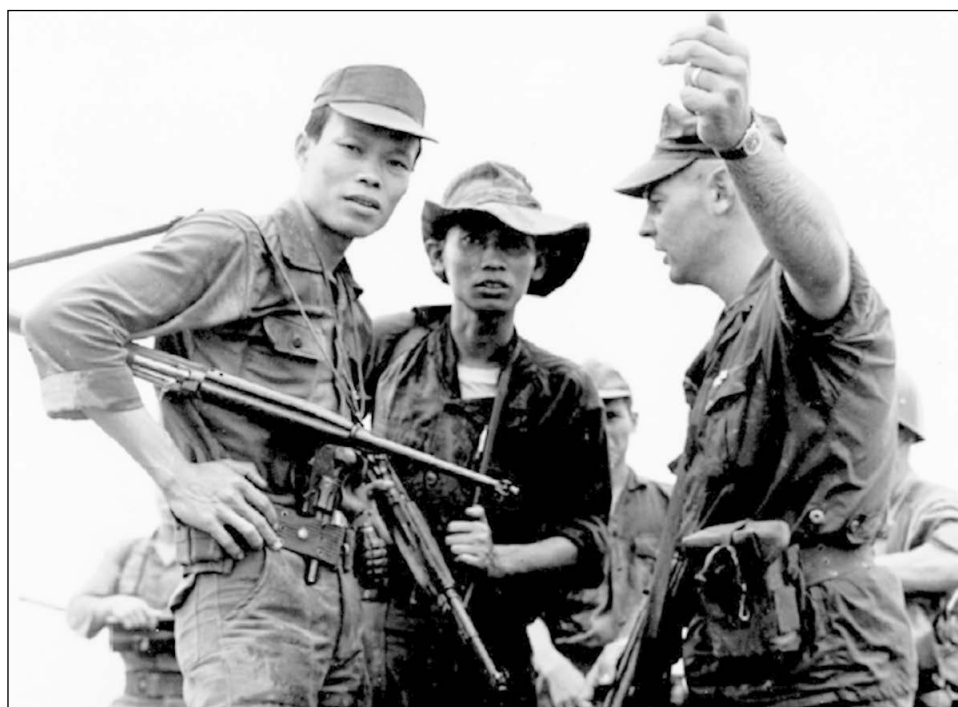Figure 1: The NVA Offensive (1965)[3]

A South Vietnamese farmer passing a US Marine on patrol, 1965.

to be repeatedly ambushed by the Marines and PF, who severed the insurgents' lines of communication within village perimeters. As they witnessed the successes of the Marines, civilians began to feel a sense of confidence in the security forces' ability to protect them. Once they felt genuinely safe, villagers provided intelligence to the Marines regarding Vietcong movements, ambush preparations and booby traps, which facilitated the Marines' ambush operations and force protection.[6] As a logical outcome of this relationship, the villagers and the Marines achieved a perfect symbiosis that facilitated mutual self-protection between peasants and security forces. During an insurgency, the local population would support the group that is most likely to provide them with stability. This is what the Marines provided to the South Vietnamese in the CAP villages. In 1966, living conditions and resources available to the civilian population continued to improve. Within the CAPs, government officials became able to contribute proactively to infrastructure development for rural communities.[7] With the Marines' constant presence, Vietcong insurgents could not operate in the villages as they did before. It was the responsibility of Vietcong political cadres to provide recruits, food, supplies and intelligence to the insurgent combat forces. The actions of the Marines within the CAPs gave a particularly hazardous

The urgency of the situation led to the initiation of major US offensives that aimed to stop the Communist regiments. Notwithstanding, the commanding officer of the Fleet Marine Force in the Pacific, General Viktor Krulak, gave his blessing to General Walt, who authorized the initiation of the Combined Action Platoon (CAP) program in the USMC's area of operations. The CAPs aimed to ensure the protection of the rural population against insurgents by permanently deploying a squad of 15 Marines with 35 South Vietnamese paramilitary forces to fortified villages. Krulak stated that by denying the insurgents access to the population, the Vietcong would lose its source of survival, as insurgents rely upon civilians for food, recruits and intelligence. Krulak claimed that in the event of a major offensive by large Communist forces, his Marines would be more than capable of confronting them.[4] It will be demonstrated later that while the basis of Krulak's theory was not completely wrong, it had flaws, given the hybrid war context of Vietnam.

In July 1965, the Marines deployed their first CAPs, and in 1969, the program reached its peak with 114 villages and a total force of 2,000 Marines and 3,000 South Vietnamese paramilitary soldiers of the Popular Force (PF).[5] It did not take long for Vietcong units

A US Marine CAP officer and South Vietnamese paramilitary forces before a strike on a Vietcong stronghold.

dimension to this function.[8] In addition, observers in the CAP markets prevented the sale of large quantities of rice to potential Vietcong agents, a tactic that made the procurement of food even more complicated for the insurgents. The situation became precarious enough for a captured Vietcong cadre to admit that the Marines had forced his troops to avoid Marine-occupied hamlets, thus forcing them to redirect their operations to non-CAP villages.[9]

Although the system proved effective in a counterinsurgency context, the situation became quite different once conventional military forces came into action. Several CAPs fell into the hands of Communist fighters who fiercely targeted the Marine villages during the Tet Offensive. These assaults, conducted by entire NVA and Vietcong battalions, required the urgent deployment of conventional reinforcements to assist the overwhelmed Marines.[10] These assaults proved, beyond any doubt, that an overall battle plan exclusively based on counterinsurgency warfare would have been catastrophic in Vietnam. Small platoon units conducting counterinsurgency are not suited to confront heavily armed battalions supported by artillery and mortar fire. Conventional and counterinsurgency forces had to synchronize their operations if they hoped to counter the Vietcong and NVA *modus operandi*. The eventual launch of the CORDS program, which introduced a concept similar to CAPs throughout the RVN, encountered similar obstacles when it was launched. However, once conventional MACV units began to coordinate their efforts with those of CORDS, the Vietcong began to show signs of weakness.

The Rise of CORDS and the Downfall of the Vietcong

CORDS became operational in May 1967 and was put under the leadership of Robert Komer, a member of the US intelligence community who had no superior other than General Westmoreland. CORDS had offices in every province in the country and counted 13,000 military and civilian personnel in its ranks. The program brought under a single umbrella every military and civilian organization charged with carrying out pacification in South Vietnam.[11] As with the CAPs, the mission was aimed at conducting civic actions while isolating Communist cadres and insurgents from the population. To this end, paramilitary forces and government cadres of the Revolutionary Development (RD) were deployed to villages and rural areas to facilitate the conduct of local governance. In order to ensure that pacification staff would not be harassed by larger Communist formations, conventional US and ARVN forces were tasked with operating on the periphery of the CORDS areas of responsibility.

Analysis of the first 15 months of the program shows that it had a tough start. The events that unfolded in Cu Chi District epitomize the overall problems that were encountered when CORDS became operational. Before the US deployment of the 25th Infantry

A member of the 1st Cav Div (Airmobile) helps a Vietnamese woman and child across a stream near An Kha, December 1967.

> **"The absence of US conventional troops facilitated Vietcong cadres' operations."**

Division to Cu Chi District, 10,769 insurgents dominated the area.[12] When the 25th Infantry was sent to the district, it initiated a succession of offensive operations, forcing large Vietcong formations to take refuge in isolated areas. This made it easier for paramilitary forces to concentrate on countering local Communist and insurgent cadres in the villages.[13] However, when US forces left the district, the Vietcong influence regained momentum. The absence of US conventional troops facilitated Vietcong cadres' operations. Supported by regular units, they had no difficulty in countering the small paramilitary forces that remained in the villages. MACV or ARVN conventional unit cooperation was essential for CORDS to succeed. An introspective report of the 95th NVA Regiment exposed the disrupting impact US regular forces' presence had on the NVA's and Vietcong's synchronization of operations. For example, the report specifies that the Communists, who controlled 260,000 civilians out of 360,000 in the Phu Yen area, now only controlled 20,000 people. The NVA report attributes this situation to the synchronization of MACV's conventional and counterinsurgency operations in the area. The plan of action suggested by

A medic of the 1ˢᵗ Infantry Division (Airmobile) helps a Vietnamese woman and child flee the Vietcong, 5 May 1967.

84,000 Communists deployed for Tet were neutralized. In addition, subsequent Communist spring offensives, dubbed "mini-Tet," inflicted heavy casualties on the Vietcong: around 1,000 Communists defected, and 5,000 insurgents and NVA soldiers were killed in action on a weekly basis. The attrition caused to the Vietcong's political infrastructure also resulted in the loss of several hundred cadres.[18]

Robert Komer undertook a genuine bureaucratic battle that aimed to force military planners to pay more attention to pacification forces. He insisted that conventional forces had to synchronize their combat operations against large Communist formations so as to facilitate the task of the government's paramilitary units in the rural areas. South Vietnamese President Nguyen Van Thieu also instructed that each village should have its RD cadres and defensive forces on a permanent basis.[19] Like Komer, Thieu insisted that ARVN commanders conduct conventional operations in conjunction with counterinsurgency initiatives. His aim was to systematically secure one area and move on to the next in order to geographically expand pacification and government control of rural sectors. This course of action, launched in November 1968, was to become the Accelerated Pacification Campaign (APC),[20] which was executed alongside CORDS. Moreover, in June 1968, General Westmoreland was replaced at the head of MACV by General Creighton Abrams. The latter was a staunch defender of counter-guerilla warfare, and believed in the need to combine conventional and counterinsurgency operations. Abrams set in motion a battle plan in which conventional forces would track down and eliminate large Communist formations; at the same time, small unit operations, including patrols and ambushes against Vietcong guerilla units would be initiated.[21] The pressure put on Vietcong forces gradually increased over the following months. Then, following a new insurgent offensive during Tet 1969, Communist losses were so catastrophic that the Vietcong headquarters, led by the Central Office for South Vietnam (COSVN), issued an order that put an end to conventional military operations for the guerrillas. The COSVN wished to concentrate its efforts on subversive and influence operations targeting the civilian population, while maximizing the mission of its political cadres and small guerilla forces.[22]

the Communist leadership was thus to "…crush the pacification plan of the enemy" and repatriate the villagers transferred to the protected villages to their former residences. The report stresses that this was a "life or death situation for the Revolution."[14] It was also reported that the "coordination" between Communist regular and insurgent troops had proven to be dysfunctional, and that the relationship between guerrilla war and regular mobile warfare was not properly exploited.[15]

The report also criticizes the inability of guerrilla troops to convince the civilian population to turn against the government. It pointed out that in previous years, proselytizing operations aimed at gaining the support of peasants worked very well at the time when troops of the 95ᵗʰ Regiment supported the guerrilla forces.[16] The Regiment's report also mentions the problems generated by the pacification efforts started in the Thon Bac sector. It specified that if the troops of the 95ᵗʰ had managed to remain close to the population by "…increasing the subversive activities" to "weaken and destroy the enemy forces," the difficulties caused by pacification initiatives could have been countered. Consequently, the NVA's leadership recommended that troops of the 95ᵗʰ Regiment coordinate their operations with the local guerrilla forces in order to specifically target the pacification initiatives in the Thon Bac region.[17] When the 25ᵗʰ US Division left Cu Chi without leaving a single battalion in the area, insurgents were able to follow a course of action similar to what was suggested in the NVA 95ᵗʰ Regiment's report. CORDS staff encountered the same obstacles in almost every South Vietnamese province. However, during the Communists' Tet offensive in 1968, the Vietcong suffered catastrophic losses, allowing CORDS to seize the initiative. About half of the

However, the losses inflicted on the insurgents during the fighting galvanized CORDS' momentum. In the summer of 1969, security around the Mekong Delta, in the south of the country, was improved to such an extent that it was possible to travel unescorted during daytime from one provincial capital to another. Each hamlet now benefited from the protection of a platoon of paramilitary forces assisted by village militias. Considering that most small guerilla units did not benefit from the support of larger Communist forces anymore, the military capabilities and political influence of the insurgents were grievously hampered.[23] Progress in pacification was not limited to the south of the country. Across the RVN as a whole, control of Communist cadres over the rural population collapsed to 12.3%, then to 3%. Protected peasants cultivated 5.1 million tonnes of rice without the Vietcong being able to benefit from it. About 47,000 Communist soldiers and cadres joined the South Vietnamese ranks through the Chieu Hoi amnesty and defector program. In 1967, 400,000 civilians were forced to leave their villages due to combat operations. In 1969, the number of refugees fell to 114,000 for the entire country.[24]

Amalgamated to CORDS was a Central Intelligence Agency (CIA) initiative called the *Phoenix* program, which was also meant to drastically exacerbate the already precarious situation of the insurgency. For decades, *Phoenix* had a poor reputation because it was unjustly labelled an assassination program. Fortunately, authors like Mike Moyar (*Phoenix and the Birds of Prey: Counterinsurgency and Counterterrorism in Vietnam*) and *Phoenix* veteran Lieutenant Colonel John Cook (*The Advisor: The Phoenix Program in Vietnam*) both set the record straight regarding *Phoenix* in Vietnam. Declassified Communist reports also expose *Phoenix*'s effectiveness against the insurgency. In many ways, the program was a precursor to what the Joint Special Operations Command executed in Iraq when US and British Special Forces crippled Al-Qaeda's leadership network between 2005 and 2011. *Phoenix* was launched in December 1967 and aimed to eliminate the Vietcong Infrastructure (VCI). VCI members constituted the political and administrative organs of the insurgency. They were supported by security forces that ensured their protection and cadres in charge of finances and taxation, as well as other members whose mandate consisted of ensuring the management and control of the civilian population.[25] The task of neutralizing VCI members fell to US Navy SEALs, South Vietnamese Special Forces of the Provincial Reconnaissance Unit (PRU), RD cadres and constabulary and paramilitary forces. By recruiting multiple informants in villages and through human intelligence collected from numerous Vietcong defectors, *Phoenix* operators caused catastrophic damage to an already crippled insurgency. In 1967, about 80,000 Communist cadres were operating in areas still under Vietcong influence.[26] In the first 11 months of 1968, *Phoenix* neutralized 13,404 cadres. In November 1968 alone, 366 cadres defected, 1,563 others were taken prisoner and 409 more were killed during operations aimed at their capture.[27] In Quang Tri Province, PRU actions caused such damage to the VCI that the Communists deployed a special commando unit to destroy a PRU operating base.[28] A COSVN document complained about the significant damage inflicted on them by the PRUs and the Chieu Hoi defector program.[29] Other seized Communist documents and interrogation reports attest that in many areas, the morale of

Vietcong cadres was "extremely low." The rate of VCI defection increased by 49% in the second half of 1968. Communist reports also indicated that a significant number of cadres were unable to operate freely within their area of responsibility, even after dark. The attrition rate inflicted by *Phoenix* on VCI members forced the COSVN to deploy new young, inexperienced cadres, totally lacking their predecessors' expertise. In several cases, a single cadre was assigned responsibilities normally allotted to two or three of his peers.[30]

Phoenix administrators attributed much of the operational success to the cooperation between MACV regular forces and intelligence corps with those dedicated to *Phoenix* operations.[31] It was also observed that *Phoenix* and regular force operations against the Vietcong and its political infrastructure encouraged the rural population to cease their collaboration with the insurgents.[32] In 1969, 19,534 more cadres were neutralized due to *Phoenix*.[33] Although *Phoenix* figures are known not to be 100% accurate (many Vietcong guerilas were mistakenly designated as VCI), the attrition caused to the VCI was reflected in COSVN reports, the drastic drop in insurgent recruitment activities, and the testimony of Communist defectors. A VCI deserter admitted that the Vietcong feared *Phoenix*, which was trying to "…destroy its organizations" and denied its cadres access to the civilian population.[34] He also stated that insurgents who did not have to deal with villagers received very specific instructions from Vietcong leadership: contacts with the population were prohibited, due to the overwhelming presence and influence of *Phoenix* agents in rural areas. The defector also said that Vietcong commanders warned their subordinates that *Phoenix* was "…a very dangerous organization" of the South Vietnamese pacification program.[35] Another communist report bemoaned the ability of *Phoenix* agents to target cadres, noting that the program's members were "…the most dangerous enemies of the Revolution." The same report insists that no organization other than Phoenix could cause the Communist struggle so many problems and difficulties. The North Vietnamese leader, Ho Chi Minh, himself admitted that he was "much more worried" about the US forces' successes against the VCI than those obtained against the NVA.[36] When peace talks began between Washington and Hanoi in Paris, Communist officials demanded the cessation of all operations related to the *Phoenix* program.[37]

In July 1969, the COSVN published Resolution 9 for its members in order to counter the negative effects of the MACV's counterinsurgency campaign. The Resolution ordered guerilla forces to focus their targeting operations upon pacification personnel in rural areas. A few months later, confronted with its subordinates' inability to follow the directives of Resolution 9, the COSVN published Resolution 14, which insisted again on the need to revert to a guerrilla warfare concept in order to overcome the enemy's pacification program. It also criticized the slowness of guerrilla force movements, as well as the low level of progress in regaining control of rural areas. In addition, Resolution 14 denounced the Party Committees' and military commanders' failure to increase pressure on counterinsurgency forces, as well as their failure to gain the civilian population's support in sectors deemed more vulnerable.[38] Other seized documents exposed the Communists' growing loss of control of rural areas. Vietcong Party

> **"Amalgamated to CORDS was a Central Intelligence Agency (CIA) initiative called the *Phoenix* program, which was also meant to drastically exacerbate the already precarious situation of the insurgency."**

Committee members in charge of the region surrounding Saigon claimed that "revolutionary forces" were under a lot of pressure, a consequence of the loss of senior cadres in the districts, as well as of the anemic population pool still accessible for recruitment. They also criticized Communist units' inability to achieve a major victory. The Committee admitted that their forces were "poor in quality and quantity," and unable to establish contact with the population. Also mentioned were the incapacity of large combat formations to operate near populated areas, and local guerillas' ineffectiveness in their attempts to convince the population to support their operations. Vietcong leadership further stated that guerrilla forces "continue to suffer losses," and remained unable to renew their strength. Political groups aimed at indoctrinating civilians were labelled "weak," small and "incompetent." The Committee recognized the control exerted by government forces over the civilian population while criticizing the inability of Communist forces to reverse the situation.[39] CORDS analysts observed that from 1968 to 1970, terrorist incidents related to Vietcong activities continued to drop. The same was true for the number of civilians killed, injured, or abducted by insurgents.[40]

William Colby, former Saigon CIA station chief, appointed as successor to Komer at the head of CORDS, explained that regular troops managed to drive large Communist formations away from rural areas, which supported the pacification program's progress. By the beginning of 1970, most pacification objectives had been achieved, with 90% of the population living in hamlets enjoying acceptable security, and 50% living in areas considered "completely secure."[41] During rural elections in 1970, 97% of populated areas were able to vote freely without Vietcong interference.[42] In 1971, terrorist acts declined by 75% in more secure areas, and by 50% in areas classified as less secure.[43] The inaccessibility of the population, the rate of desertions, and the inability to operate freely in the country drastically hampered the Vietcong's ability to remain combat effective. At this point, in most of the insurgency's areas of responsibility in South Vietnam, 70% to 80% of the remaining Vietcong units were, in fact, made up of regular NVA soldiers.[44]

From Hybrid to Conventional Warfare: The NVA's Military Victory in South Vietnam

In 1972, the North Vietnamese regular forces, far from being decimated like the Vietcong, took charge of military operations and launched the "Spring Offensive," a major multi-divisional campaign aimed at destroying the ARVN and regaining the initiative following US combat forces' departure from South Vietnam. Multiple NVA divisions supported by Soviet-supplied tanks and artillery invaded the South via the DMZ and Laos while several more divisions, dispatched from Cambodia, invaded the southern parts of the country. This offensive marked the end of the Vietnam War as a hybrid conflict as the NVA relied exclusively on conventional warfare tactics. Two NVA divisions took control of three districts in the centre of South Vietnam, which like in 1965, was on the verge of being cut in half.[45]
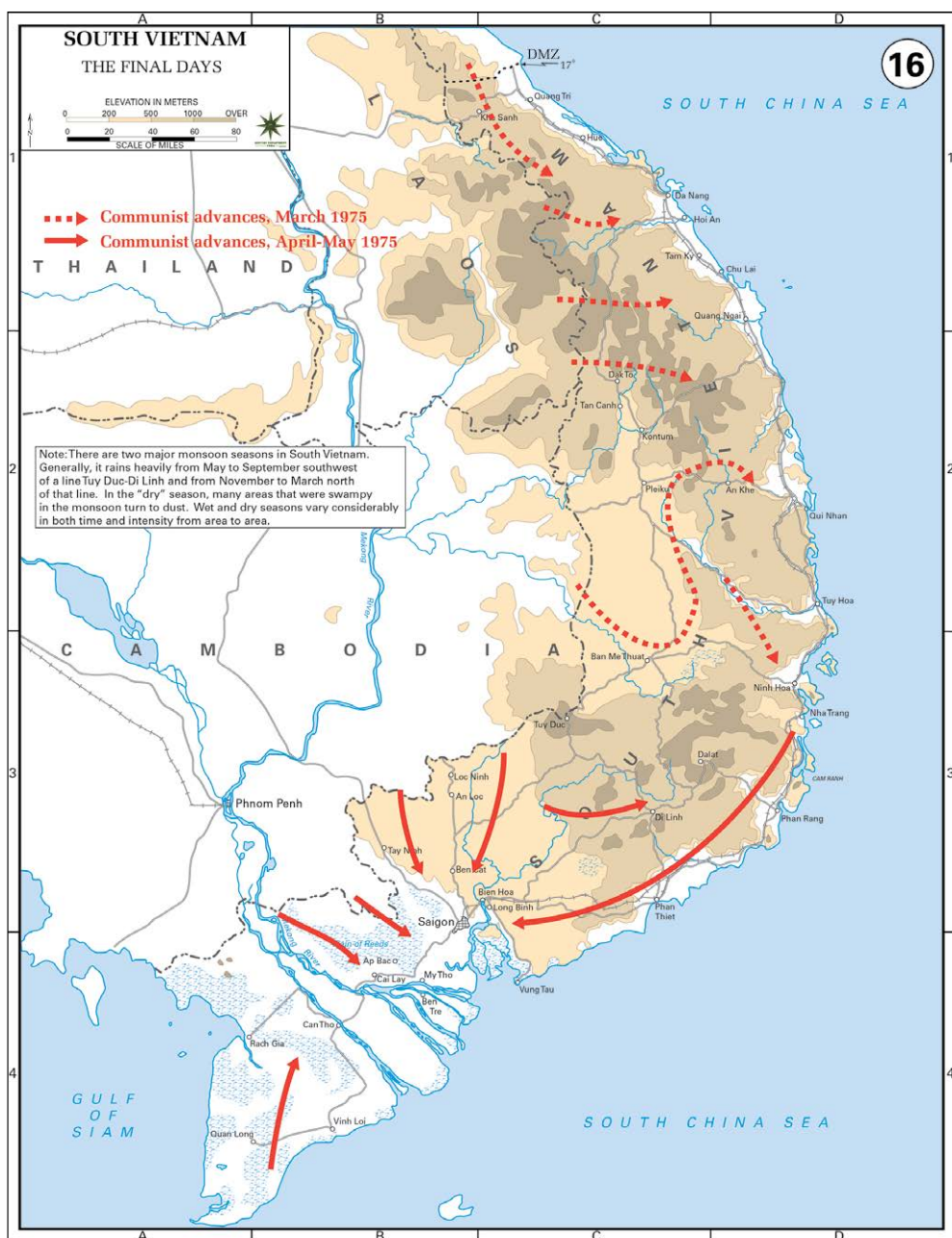

Figure 2: The NVA's Final Invasion of South Vietnam[46]

A pair of riflemen of the 173rd Airborne Brigade charge toward Vietcong positions in a wooded area in War Zone "D."

action (only 10,000 fewer than all US casualties for the whole war).[48] General Abrams stated that without the B-52s, it would have been impossible to stop the NVA. However, he also mentioned that the B-52s would not have been enough if the ARVN had not stood its ground against the NVA.[49] At that point in the war, the military threat was of a conventional nature, and it required a South Vietnamese Army ready to fight using classic defensive and offensive military tactics if it was to successfully counter the next Communist offensive.

Military hostilities subsequent to the Spring Offensive did not involve much of what remained of the Vietcong, whose actual impact upon the battlefield became sporadic. The once-powerful insurgency was to assume no significant role in what was to bring about the fall of South Vietnam. Three years were enough for Hanoi to rebuild its forces following the scathing defeat of 1972. In the spring of 1975, the NVA launched a new multi-divisional campaign in the RVN. The entire country was attacked via multiple fronts by several NVA divisions in a *blitzkrieg*-style offensive, with infantry supported by tanks and artillery (Figs 2 & 3). ARVN forces were outflanked and consistently retreated despite all the training and weaponry the Americans provided to the South Vietnamese soldiers.
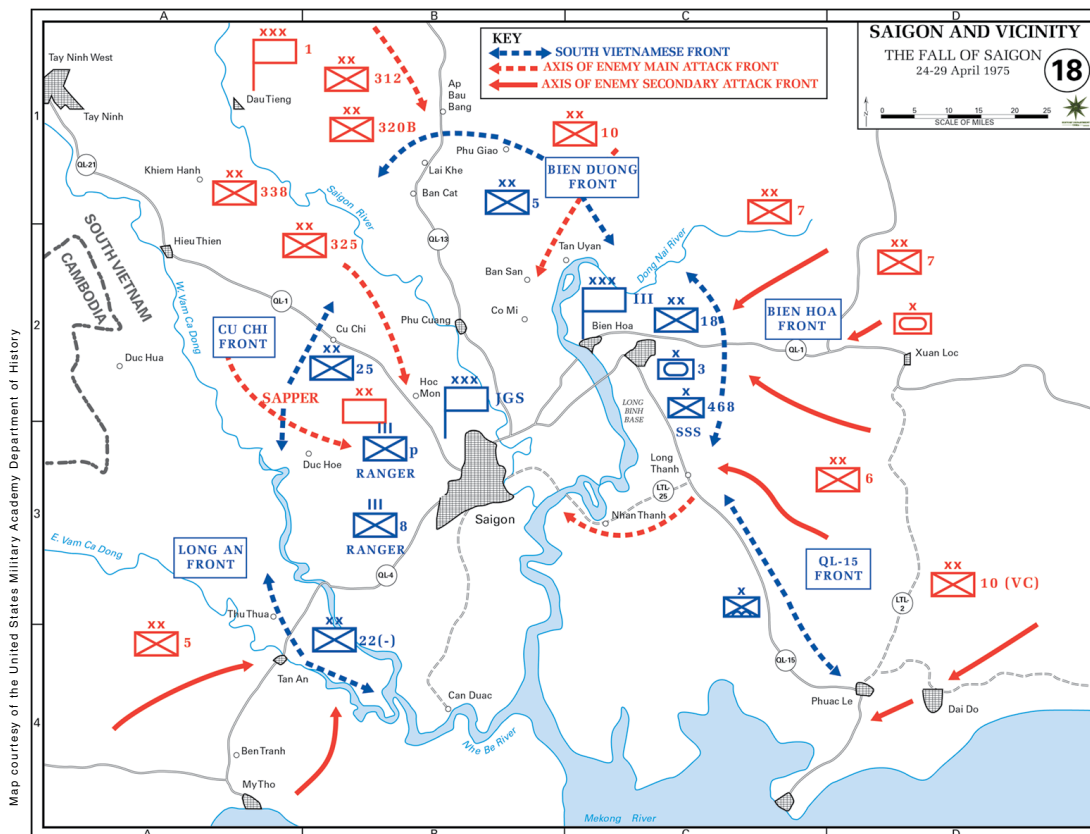
However, NVA regiments suffered massive casualties as they were pushed back by ARVN divisions supported by US advisors and B-52 bombers.[47] In order to stop the NVA, B-52s conducted 4,759 bombing missions. Approximately 400 tanks were destroyed, and about 48,000 NVA soldiers were killed in

During the hostilities, NVA soldiers proved they were superior fighters to their South Vietnamese counterparts once the latter were deprived of US air support. On this occasion, no B-52s or US advisors were sent to assist the ARVN, which saw each of its regiments systematically wiped out by North Vietnamese units. Even though US President Gerald Ford expressed the will to order the deployment of B-52s to stop the Communist invasion, the United States Congress, which sought to reaffirm its powers, opposed the President's request, thereby leaving South Vietnam to

Figure 3: The NVA's Offensive on Saigon[50]

The capture of Saigon, 30 April 1975.

its fate.[51] While the Vietcong insurgency was effectively defeated, the NVA remained operational and well supplied, which allowed its forces to invade South Vietnam and best the ARVN in combat.

Conclusion

Close examination of tactical military operations in Vietnam clearly exposes the following facts: first, the Communists' *modus operandi* in Vietnam entirely justified MACV's concept of operations, which, aside from counterinsurgency, exploited conventional military doctrine to counter NVA and larger Vietcong units. The NVA maximized conventional warfare doctrine, while the Vietcong used both conventional and guerrilla tactics, thus requiring a symmetric US and South Vietnamese military response. A military campaign exclusively set upon counterinsurgency would have been a catastrophe, as was demonstrated with the Marines' CAPs. As effective as they were in a guerilla war context, CAPs showed great vulnerability when confronted by regular Communist regiments. The same can be said of the CORDS program at its beginnings: the presence of large Communist units proved far too difficult to manage for small platoons tasked with counterinsurgency operations. This is why it remained critical for MACV and South Vietnamese regular forces to synchronize their conventional military operations with counterinsurgency initiatives, a situation that was corrected under the leadership of General Creighton Abrams and Nguyen Van Thieu's APC.

Second, while it took time and adjustments, the US military demonstrated tremendous ability in exercising counterinsurgency in Vietnam. Declassified Communist documents expose the extent of the Communist leadership's grievances regarding the devastating effects the CORDS and *Phoenix* programs had on the VCI. The latter, as well as Vietcong troops, defected by the tens of thousands, and Communist cadres lost most of their grip on rural South Vietnam. Although the insurgency was ultimately neutralized and mainly composed of NVA soldiers in 1971, Hanoi's hybrid warfare strategy also relied on its conventional forces of the NVA, which leads us to the third and final fact: in the end, it was NVA regular battalions, not the Vietcong, who overran ARVN forces on the battlefield. In 1972, when the NVA took over Communist military operations, the conflict morphed into a conventional war. MACV's ability to neutralize the insurgency was simply not enough, given the NVA's continuous presence on the battlefield. In the end, the NVA managed to defeat the ARVN and bring about the fall of South Vietnam in April 1975. Paradoxically, it was the US forces' inability to neutralize the Communists' regular army, as well as the ARVN's lack of proficiency in conventional warfare that brought about the South's military defeat, not "bad counterinsurgency," or "overreliance" upon conventional tactics.

In retrospect, much is still to be learned from the American experience in Vietnam. One of the biggest post-war blunders of the US military was to put aside everything they learned through their experience in developing and executing their counterinsurgency program in a hybrid warfare environment. After the war, the Pentagon undertook a series of reforms to reinvigorate its armed forces. This restructuring was enabled through the Training and Doctrine Command (TRADOC). Analysis of TRADOC's post-war training program and Army field manuals unambiguously exposes the military's tendency to focus its attention almost solely on conventional warfare while all aspects related to counterinsurgency and hybrid warfare were basically ignored. Rather than providing feedback on counterinsurgency and hybrid operations in Vietnam, TRADOC preferred to revitalize its conventional doctrine by drawing on lessons learned by the Israeli Army during the Yom Kippur War.[52] US military leadership, completely saturated by the Vietnam War, seemed determined to forget all it had learned, through sweat and blood, when it conceptualized its counterinsurgency strategy in South Vietnam.

Third, when US forces were confronted by a violent insurgency in Iraq in 2003, they had to go back to the basics of counterinsurgency. The US military thus needed to *relearn* what it had *unlearned*, which cost the lives of thousands of Americans and Iraqis on the battlefield. This tendency is not unique to the US military: when Canadian forces came back from Afghanistan, the same dynamic was observed as the focus of military training was set upon conventional warfare, while the hard counterinsurgency lessons learned on the Afghan battlefield were mostly set aside. Modern armies are bred to conduct conventional warfare, and hence, have a duty to hone their soldiers' skills in that regard. However, this should never be done at the expense of knowledge acquired through arduous counterinsurgency military campaigns. The fact that hybrid warfare is a phenomenon on the rise in the 21st Century brings credence to this assertion, thus making the Vietnam experience a real treasure trove of lessons learned for all modern military forces anxious to be ready for the next war.

CMJ

South Vietnamese refugees fleeing the communist conquest of Saigon in 1975 arrive at Camp Foster, Okinawa, Japan.

NOTES

1   USMC Records/Headquarters Marine Corps History and Museum Division. *Background and Draft Material for U.S. Marines in Vietnam.* College Park, National Archives, RG#127, Entry A-1(1085), Box 23, p. 1.

2   Pentagon Papers. *Part IV. C. 5[Part IV. C. 5.] Evolution of the War. Direct Action: The Johnson Commitments, 1964-1968.* College Park National Archives Identifier: 5890504, Container ID: 4, p. 3.

3   US Military Academy West Point, Maps and Atlases, Vietnam War "NVA Plan for 1965."

4   William R. Corson. *The Betrayal.* New York, Norton & Company, 1968, p. 184.

5   *Ibid.*

6   USMC Records/Headquarters Marine Corps History and Museum Division. *Modification to the III MAF Combined Action Program in the RVN.* College Park, National Archives, NND 9841145, RG#127, Box 119, p. C-9-C-10.

7   *Ibid.,* p. C-12-C-14.

8   USMC Records/History and Museum Division. *III MAF. Marine Combined Action Program in Vietnam by Lt Col W.R. Corson USMC.* College Park, National Archives, NND 984145, RG#127, Box 152, pp. 14-15.

9   *Ibid.,* p. 186.

10 Michael E. Peterson. *The Combined Action Platoons.* New York, Praeger, 1989, pp. 56-58.

11 Records of the US Forces in Southeast Asia/ Headquarters, MACV Office of CORDS Pacification Studies Group. *General Records US Weekly Returnee Reports 1969 thru Plans/1970.* College Park, National Archives, NND 45603, RG#472, Box 7.

12 Records of the US Forces in Southeast Asia/ Headquarters, MACV Office of CORDS Pacification Studies Group. *General Records 1601-04 USAID/CORD Spring Review PSG 64/70 1970 thru 1601-10A.* College Park, National Archives, NND 994025, RG#472, Box 8, pp. 1-2, 10-11.

13 Records of the US Forces in Southeast Asia/ Headquarters, MACV Office of CORDS Pacification Studies Group. *General Records US Weekly Returnee Reports 1969 thru Plans/1970/ Supplements, op. cit.*

14 U.S. Army Military History Institute. *Vietnam Documents and Research Notes Series Translation and Analysis of Significant Viet-Cong/North Vietnamese Documents, Problems of a North Vietnamese Regiment.* Carlisle, War College, ProQuest Folder: 003233-001-0131, p. 26.

15 *Ibid.,* p. 4.

16 *Ibid.,* p. 11.

17 *Ibid.,* pp. 14-15.

18 Thomas Ahern. *Vietnam Declassified.* Lexington, University Press of Kentucky, 2010, p. 306.

19 Stephen Young. *The Theory and Practice of Associative Power.* Lanham, Hamilton Books, 2017, pp. 128-129.

20 *Ibid.*

21 Lewis Sorley. *Vietnam Chronicles The Abrams Tapes 1968-1972.* Lubbock, Texas Tech University Press, 2004, p. xix.

22 Records of the US Forces in Southeast Asia, MACV Office of CORDS, MR 1 Phuong Hoang Division. *General Records 1603-03A: PRU Correspondence: Reports – VIETCONG/ NVN Propaganda Analysis 1970.* College Park, National Archives, NND 974306, RG#472, Box 12, p. 1.

23 *Ibid.,* pp. 163-164.

24 *Ibid.,* p. 180.

25 *Ibid.*

26 Records of the US Forces in Southeast Asia, MACV Office of CORDS, MR 2 Phuong Hoang Division. *General Record Operation Phung Hoang Rooting Out the Communists' Shadow Government.* College Park, National Archives, NND 974306, RG#472, Entry: 33104, Box 4, p. 2.

27 *Ibid.*

28 Andrew Finlayson. *Marine Advisors With the Vietnamese PRU, 1966-1970.* Quantico, USMC History Division, 2009, pp. 15-16.

29 U.S. Army Military Institute. *Translation and Analysis of Significant Viet-Cong/North Vietnamese Documents, A COSVN Directive for Eliminating Contacts With Puppet Personnel and Other "Complex Problems."* Carlisle, War College, ProQuest Folder: 003233-001-0731, p. 3.

30 *Ibid.*

31 *Ibid.*

32 *Ibid.*

33 Records of the US Forces in Southeast Asia/ Headquarters, MACV Office of CORDS Pacification Studies Group. *General Records Phung Hoang 1968 thru Vietnamization/C/S Letter 1969.* College Park, National Archives, NND 003062, RG#472, Entry: PSG, Box 3, pp. 7-8.

34 Records of the US Forces in Southeast Asia, MACV Office of CORDS, MR 2 Phuong Hoang Division. *General Records 1602-08: US/GVN Insp. Team Visits, Jul-Dec 1970.* College Park, National Archives, NND 974305, RG# 472, Entry 33104, Box 7, p. 2.

35 *Ibid.*

36 Finlayson, *op. cit.,* pp. 27.

37 Records of the US Forces in Southeast Asia, MACV Office of CORDS, MR 2 Phuong Hoang Division. *General Records 207-01: Reorganisation 1970.* College Park, National Archives, NND 974306, RG#472, Entry: 33205, Box 5, p. 1.

38 U.S. Army Military Institute. *Translation and Analysis of Significant Viet-Cong/North Vietnamese Documents. A preliminary report on activities during the 1969 Autumn Campaign.* Carlisle, War College, Pro Quest Folder: 003233-001-0741, p. 1.

39 *Ibid.,* pp.1-2, 6-7.

40 Records of the US Forces in Southeast Asia/ Headquarters, MACV Office of CORDS Pacification Studies Group. *General Records 1601-10A IV Corps/Phong Dinh/Trip Report 1970.* College Park, National Archives, NND 994025, RG#472, Box 9.

41 Historical Division Joint Secretariat JCS. *The Joint Chiefs of Staff and the War in Vietnam, 1969-1970.* Washington, Historical Division Joint Secretariat JCS, July 1, 1970, pp. 431-432.

42 *Ibid.,* p. 448.

43 *Ibid.,* pp. 222-225.

44 *Ibid.,* pp. 1-2.

45 Young, *op. cit.,* pp. 236-239.

46 US Military Academy West Point, Maps and Atlases, Vietnam War "The Final Days."

47 *Ibid.,* p. 239.

48 Sorley, *op. cit.,* pp. 872-873.

49 Young, *op. cit.,* pp. 244-245.

50 US Military Academy West Point, Maps and Atlases, Vietnam War "The Fall of Saigon."

51 Robert R. Tomes. *US Defense Strategy from Vietnam to Operation Iraqi Freedom.* New York, Routledge, 2007, p. 54.

52 Combat Studies Institute. *Selected Papers of General William E. Depuy.* Fort Leavenworth, Training and Doctrine Command (TRADOC), 1973, pp. 70-71.

Mentoring and Motivating Millennials and Post-Millennials at the Unit and Sub-Unit Levels

by Timothy S. Stackhouse

Introduction

To ensure Unit and Sub-Unit chains of command of the Canadian Armed Forces (CAF) are prepared to lead an evolving mindset of the modern generation of soldiers, leadership must first understand the definitions, social attributes, and expectations of the Millennial and Post-Millennial cohorts. In doing so, soldiers of this generation and their chains of command will grow a relationship based upon trust and reliability, as well as foster the core ethos and values that create a Canadian soldier. Due to the proximity of the generational definitions of Millennial and Post-Millennial, the *former* will be used in this article to refer to both cohorts. As Post-Millennials are newly entering the workforce, research on this cohort is currently limited.

As outlined in Canada's most recent (2017) defence policy, *Strong, Secure, Engaged* (SSE), the CAF has accepted a greater position in supporting Canadian soldiers and their families. In the policy, the government of Canada has established that families, diversity, inclusion, and training opportunities are among the priorities of the modern soldier (p. 12 of SSE). This policy, along with other CAF policies related to gender and diversity, include Operation *Honour* (National Defence, 2019) and CAF Diversity Strategy (National Defence, 2019). Despite their important role in the development of a safe workplace, discussion with respect to racism is not covered, and these factors are vital principles of today's generation. Adapting to the concerns of Millennials is fundamental, not only for the CAF *writ large*, but also for its Units and Sub-Units. Subject matter authority's Eversole, Venneberg, and Crowder (2012) note that in today's workforce faces, for the first time ever, four generational cohorts are employed in the same workplace together (as cited in Carpenter & de Charon, 2014, p. 68).

Discussion

The following definitions differentiate each generational cohort relevant to/in accordance with their years of birth: Baby Boomer: 1946–1964; Generation X: 1965–1980; Millennial: 1981–2000; and Post-Millennial: 2001–present (cited in Wright, 2015, p. 2). It is important to note that research has argued about the exact definition of each generational cohort. Likewise, there is not a definitive border between each group. As such, it is understandable that a Millennial, born in the early-1980s would have similar viewpoints and expectations as a member of Generation X, born in the late-1970s, as opposed to a fellow Millennial born in the late-1990s. For this reason, this discussion will focus primarily on the Millennials born in the 1990s onward, as this group is most representative of the newer generation of soldiers.

Research into the Millennial cohort has established many attributes of this generation, which are essential for those in managerial positions to understand. What motivates Millennials within the workplace, what keeps Millennials engaged, and what encourages them to be retained, includes:

- motivation frequently comes from praise, recognition, and reward; they want to be noticed for their work and achievements;

- workplace flexibility is desired, as is the want for work-life balance, training and development opportunities, as well as diversity;

- while orientation and probationary period is understandable, there is an expectation to excel quickly through the ranks;

- there is a desire for competitive pay and benefits, with fewer rules;

- frequent contact with their leadership, allowing the sense of belonging is important; and wanting more free time, and for their work to feel meaningful (cited in Carpenter & de Charon, 2014).

Further, Millennials may have different personality traits, which must be considered by leadership (Carpenter & de Charon, 2014). It is important to note that these traits are generational, and reprimand is not the appropriate course of action, rather, Millennials:

- are more fearless and tend to be blunter than previous generations;

- have expectations that mentors will approach them, not vice versa, and also expect the organization to feed them the ability to reach the next level; despite this, not one mentor or teacher is suitable, but rather, the idea of seeking different perspectives is common;

- expect leaders should dedicate more one-on-one career planning and succession planning at an earlier stage;

- are uncomfortable feeling towards conflict, stereotyping, judging, or complaints; as such, stereotyping employees as Millennials may cause hesitance for openness and honesty (Carpenter & de Charon, 2014, p. 74).

Additionally, when working with Millennials, there is a requirement for increased and more significant feedback sessions, based on honesty and sincerity, delivered in real-time, to establish an honest and trustworthy relationship with leadership (cited at Gerrior, 2016, p. 10). Concerns have been raised about leadership losing touch with this generation of employees, noting such traits as micromanaging, negativity, condescending, inconsistency, cynicism, and disorganization (Gerrior, 2016, p. 9). On the other hand, establishing clear expectations and targets will allow a full understanding of work requirements.

Some attention has been given to the specific needs of Millennial soldiers. For example, subject matter O'Donnell noted ted the view of the Millennial soldier to include (p. 9):

- the desire to understand the history, culture, and norms of the organization, as well as *why* this history exists; a positive attribute to the negatively portrayed, *Generation Y (Why)*;

- the desire to learn from experience comes from the experience, not from titles or appointment.

- Further, Drago (2006, p. 10) added the following characteristics of Millennials, which those in military leadership positions need to understand:

- strong sense of community, combined with listing tolerance and acceptance as core values;

- team players, with adaptability and innovation;

- extremely confident, loyal, and committed.

Recommendations

Many of the attributes of Millennials mentioned above have already influenced the CAF to consider and implement certain policy changes. Increased flexibility and relaxed work environments are already discussed or in place, including things such as changes to hair length and style, facial hair growth, as well as the acceptable use of cannabis. Other possible future changes include the implementation of telecommuting and work-term flexibility through *The Journey* (National Defence, 2018). Also, as expressed in *Strong, Secure, Engaged* (p. 12), increased funding and resources are now made available to service families, allowing soldiers to better focus on the mission. Many of the leadership styles that correspond with a Millennial's viewpoint are achievable through intrinsic and extrinsic motivation, both of which are styles currently encouraged for use within the CAF leadership (Browne & Walker, 2008, p. 419; National Defence, 2007, p. 45).

The Journey acknowledged the need for improvement in the goals to encourage career retention for CAF personnel, and outlined six goals to promote wellness of personnel and their families, while ensuring a smooth transition along their career through to retirement and beyond. It must be noted that these goals remain in the planning stages, and thus have not been implemented in entirety across the CAF:

DND photo LK2012-007-018 by Sergeant Lance Wade

1. reform all aspects of personnel generation, from Attraction and Selection to Recruit Intake Processing and Training;

2. modernize employment model and seek to incentivize service in innovative ways as we provide a more flexible and adaptive career path;

3. improve support to military families;

4. optimize the health and wellness of CAF members;

5. reinvent transition to better support all members of the CAF as they return to duty following illness or injury, transition to the care of Veterans Affairs Canada (VAC), or transition to post-military life;

6. collaborate on Veterans initiatives to ensure that all members of the CAF experience a positive sense of enduring affiliation. (National Defence, 2018)

There remain several potential options for the Unit and Sub-Unit levels to suit the needs and desires of the Millennial and Post-Millennial generations who currently serve in the CAF. Based on the above descriptions and ideas of these cohorts, the following recommendations may be considered for use within Units and Sub-Units:

Unit/Sub-Unit Level Career Management

While soldiers are able to discuss career progression with the Regimental Sergeant-Major (RSM), career planning can be enhanced for the soldier by providing higher-level progression interviews every six months. Currently, the immediate supervisor (usually 'one-up') conducts these interviews quarterly. However, allowing the soldier to meet with a Company Sergeant-Major (CSM) every six months, would allow for higher-level discussion of progression, desires and interests. This could allow significant opportunity for the soldier to proceed down the path of their interest or provide the necessary training to help support career progression.

Increased Job Variations

To support Millennial characteristics, increased job variations during a 6 – 12-month rotation could promote motivation, enhanced skills, and training opportunities, while fostering interests and desires. Once/if a soldier finds their niche of interest, they will be better able to excel therein. Allowing the opportunity for soldiers to work in different specialties on a 6-month basis will also decrease boredom, while enabling greater and increased feedback ability throughout the year.

Telecommuting/Daily Routine

To influence flexibility, parameters, and goals can be established, allowing soldiers to work on specific projects from home. For example, DNDLearn (the CAF's online learning tool) requirements for individual soldier readiness can be achieved at home, with a set expectation that a certain achievement will be met by a given week's-end. Also, the daily routine may include earlier dismissal to allow soldiers to return home to complete the online learning. Several technology services are already available to promote communication between home and the workplace, such as *Skype for Business*, *Zoom*, *Webex*, and other such video chat sources.

Low-Level Peer Mentorship Program

While the expectation is for immediate supervisors to train and develop subordinates, there is seldom an official mentorship program in place. Allowing a corporal increased supervision over a private will not only promote the corporal's leadership ability, but will allow the private to receive timely feedback regarding performance. Ensuring progress reviews are done immediately after a task will allow feedback to be provided when it can have the greatest impact, and coming from a peer of one rank higher may have an even greater impact. This holds true for the development and execution of an action plan.

Training

Far too often, there is a frantic push to ensure all soldiers are complete regarding individual readiness. A rewards system may motivate soldiers to ensure they aspire to attain complete readiness status, promoting teamwork and recognition (with a competitive edge). This can be as simple as a certificate with empty spots, in which a stamp is obtained upon completion of each specific area required. An additional option is group completion for many of the online courses. Rather than ordering each soldier to complete the required course, the course can be conducted in a group setting, instructed by a subject-matter expert.

Town Hall Frequency

Soldiers feel empowered when the opportunity exists for them to voice concerns and to 'pitch' ideas to the higher leadership. Quarterly sessions should be held within different levels of leadership to engage in facilitated collaborative discussion of where things *are,* and where things *are going*. Although this discussion may include a difference of views, it may also allow a thorough explanation in a direct line of communication, limiting the chances of miscommunication, and contribute to increased shared understanding of operations.

Embrace Diversity

The CAF has made considerable waves embracing diversity at the National level. Supporting such campaigns as Black History Month, Aboriginal Awareness Week, International Women's Day, and Pride, to name a few, promotes diversity and community. Such diversity can easily be shared at the Unit level by genuinely delivering a community network within the workplace by celebrating multiculturalism. Offering a day or week-long celebration of sharing food, song, dance, and culture will allow all members of the Unit the opportunity to belong. In addition, it is essential that greater awareness for racial diversity is important to ensure a safe place, free of racism and racial discrimination. The conversation about systemic racism and microaggression must begin at the lowest level of rank and within initial military indoctrination, with continued training and discussion at the Unit and Sub-unit levels.

Conclusion

The CAF influences change from a 'top-down' approach when it comes to altering the course of previous norms. In order to modernize and embrace a new generation of the soldier, Units must also lead the change. Creating new customs, traditions, and norms will allow today's soldier to feel invested in the Corps, and to feel valued within the workplace. Millennials value family, and upon joining the CAF, their Unit is their family. To fully engage with the Millennial generation, Units must ensure new soldiers feel safe, comfortable, and welcomed. When our soldiers feel comfortable, they will feel as though they are valuable a part of the team; if they are a part of the team, the team will be successful.

Master Warrant Officer Tim Stackhouse, CD, *is the Company Sergeant Major for Medical Company, 1 Field Ambulance, based in Edmonton, Alberta. He is currently enrolled in postgraduate studies at Royal Roads University in the Master of Disaster and Emergency Management program. Tim also volunteers his time as a member of the board of directors for the Royal Canadian Medical Service Association.*

CMJ

REFERENCES

Browne, P. P. and Walker, R.W. (2008). Chapter 30: Motivation. In *The Military Leadership Handbook* (pp. 414-424).

Carpenter, M.J., and de Charon, L.C. (2014). Mitigating multigenerational conflict and attracting, motivating, and retaining millennial employees by changing the organizational culture: A theoretical model. *Journal of Psychological Issues in Organizational Culture 5*(3), 68-84. doi: 10.1002/jpoc.21154

Department of National Defence. (2007). Leading people. In *Leadership in the Canadian Forces*. Government of Canada. Ottawa.

Department of National Defence. (2017). *Strong, secure, engaged*. Government of Canada. Ottawa.

Department of National Defence. (2018). *The Journey*. Government of Canada. Ottawa.

Department of National Defence (2019). *Fostering an inclusive and diverse workplace*. Government of Canada. Ottawa.

Department of National Defence. (2019). *The Operation HONOUR manual: A comprehensive guide to information and resources on sexual misconduct*. Government of Canada. Ottawa.

Drago, J.P. (2006). *Generational theory: Implications for recruiting the Millennials*. Army War College. United States Army. Retrieved from https://apps.dtic.mil/docs/citations/ADA449672

Gerrior, H.E. (2016). *The Millennial and the military*. Joint Command and Staff Course Paper, Canadian Forces College, 2016. Retrieved from https://www.cfc.forces.gc.ca/259/290/301/305/gerriorh.pdf

O'Donnell, J. (n.d.). *Star techs: The next generation. How the Canadian Artillery can adapt to best incorporate future generations*. Retrieved from http://rca-arc.org/wp-content/uploads/2019/03/Star-Techs-The-Next-Generation_ODonnell-3rd-Place.pdf

Sampson, J.D. (2018). *The Millennial challenge*. Joint Command and Staff Course Paper, Canadian Forces College, 2018. Retrieved from https://www.cfc.forces.gc.ca/259/290/405/305/samson.pdf

Wright, K.M. (2015). *Generations collide – The need for the Canadian Armed Forces to adapt to the millennial generation*. Joint Command and Staff Course Paper, Canadian Forces College, 2015. Retrieved from https://www.cfc.forces.gc.ca/259/290/317/305/wright.pdf

The Fight for History: 75 Years of Forgetting, Remembering, and Remaking Canada's Second World War

by Tim Cook

Reviewed by Joel Watson

The Fight for History should come with a warning: "DO NOT READ BEFORE BED," as each turn of the page gets the blood boiling, and sleep does not come easily afterwards. While the book overtly deals with the failure to remember the Canadians who defeated German, Italian, and Japanese tyranny, there is also a disturbing undercurrent of a Canada refusing to accept that it has become a serious country in a serious world. Tim Cook, one of Canada's preeminent and best-selling military historians, methodically exposes Canada's failure to remember and learn from the Second World War, but *The Fight for History* is not just the fight to remember the past. It is a fight to educate a future generation of citizens about Canada's responsibilities in a harsh world. It is essential reading for those concerned about keeping Canada strong and free.

Cook begins with a sad reminder of why Canadians fought the Second World War, since many have either *forgotten* or have not been *taught* the horrors of the mid-20th Century, mainly because Canada's martial history has fallen out of favour. Concentration camps and death marches may come as a shock to those exposed only to Canada's own historical failings, but no more so than discovering that the "Peaceable Kingdom" had a bloody reputation from the First World War. Canada was a serious war-fighting nation when it landed as one of only three designated Armies in both Sicily and Normandy between the British and the Americans, when it trained Commonwealth aircrews *en masse*, and when it took charge of the North Atlantic Convoy Routes. While Canadian students are taught a narrative of defeat and failing, of Dieppe and Japanese-Canadian Internment, they are not taught that Canada fought toe-to-toe with the most fanatical SS Panzer forces Germany could throw at the Allies, and defeated them, in addition to becoming an industrial and maritime powerhouse. Absent is recognition of the horrors of Axis conquest and the unfathomable treatment of Canadian Prisoners of War. It seems that only the Dutch remember that Canadians liberated them from horror and starvation through miserable waterborne fighting, few Canadians do. Even fewer remember that Canadians were among those who discovered the Bergen-Belsen Concentration Camp, where almost 30,000 corpses were found together with 60,000 walking dead, and yet the CBC, through its taxpayer funded programing, had Canadians 'second guessing' the need to bomb Germany. Cook argues that not until historians like Terry Copp and Jack Granatstein, and veterans like Cliff Chadderton and Garth Webb took it upon themselves to reveal Canada's Second World War history did Canada's contribution begin to get its due. While writing about contested memory and the politics of memorials, Cook convincingly argues that Canada's Second World War was not a failure as it is taught, but a "Necessary War" where Canada played a vital role that must be remembered holistically in order to secure a better future.

The story of how Canada forgot and then remembered its Necessary War is, as Cook puts it, "...messy, tangled and complex," but he dissects each phase of the post-war period, and reveals how a chain of circumstances, some intentional, some not, obscured Canada's contribution. Cook lays out the overt suppression of the history in the post-war period; everything from the refusal to build monuments at home and overseas, to the absence of academic histories, biographies, and even movies. Cook is sympathetic to those exhausted veterans who simply wanted to forget about it and move on with their lives, and to those who wanted functional memorials, such as hockey arenas. He acknowledges that superior benefits provided to the Second World War veterans, as well as the booming economy, allowed them to move on in a way denied their First World War predecessors. However, he takes a hard line with governments, institutions, historians, and military leaders who failed in their duty to ensure that the "why" and the "how" of wars, together with the lessons about the civic virtues of those who fought, are not forgotten. Cook takes an even harder line with those who failed to do their research or abused history for their own ends. He exposes battles over monuments and the War Museum, detailing the political intrigue of commemoration, the struggles of the Legion, the apology campaigns, the influence of Vietnam, the summers of love, the Cold War, and the political difficulties of a Quebec sensitive about conscription, and feeling/expressing separatist impulses.

Fact and example build the case, that unlike after the First World War, where Prime Minister Borden fought for a seat at the peace table, and memorials were built to remind all of Canada's service, after the Second World War, from McKenzie-King's to Pierre Trudeau's Canada. did not fight at all. While other allies commemorated their struggle, Canada's Minister of Defence said that "nobody would be interested…" in 1948, and what followed was years of broken promises to veterans and an inward turning,
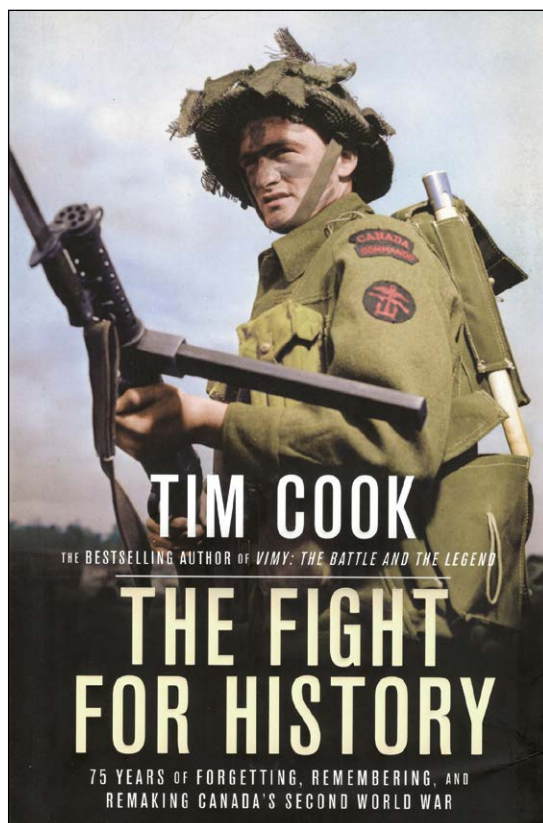
which not only denied Canada's contribution to the Necessary War but also implicitly Canada's adult responsibility to its citizens and the world. While some will argue that Pearsonian Peacekeeping was Canada's contribution to the post-war period and defined what it meant to be Canadian, Cook dismantles that argument. He confronts head-on the deliberate crafting of the peacekeeping narrative and shows that peacekeeping as an operational reality was only briefly practical, even though the myth persisted long after, fed by those who would deny Canada's warlike past so as to inculcate a new multicultural and post-colonial narrative. Ironically, it was only when bloody conflict in the Balkans and Afghanistan made it clear that Pearsonian peacekeeping was dead, and Veterans returned to thankful crowds in Europe, did

interest and support for remembering Canada's contribution to the Necessary War, reassert itself.

The Fight for History is a stark reminder of how dangerous the politics of history can be. Cook writes: "In the fight for our history, this book has shown the necessity of guardians of the past…", to which he could have added "and pathfinders for the future."

Joel Watson *is a former Armoured Officer, Director of Legal Services to the Minister of Veteran Affairs, and Fellow at the Gregg Centre for the Study of War and Society at the University of New Brunswick.*

Trust and Leadership: The Australian Army Approach to Mission Command

by Russell W. Glenn (ed.)

University of North Georgia University Press

Dahlonega, Georgia, 2020

411 pages

Reviewed by Howard G. Coombs

*T*rust and Leadership: The Australian Army Approach to Mission Command *is an edited collection written by academics and practitioners who have brought together assessments of the Australian style of mission command using a historical case study approach. The manuscript sections range in chronology from the First World War through all major and minor conflicts of the 20th and 21st centuries, ending with contemporary operations in Afghanistan and Iraq. Although written from an Australian perspective, sufficient explanation, and comparison with American ideas of mission command, make this volume useful to a wide-ranging American and Commonwealth readership.

There is a useful review of mission command concepts provided in both the Foreword and in the Introduction. The individual chapter authors demonstrate sound understanding of the specific bodies of literature related to the topics of their sections. In some cases, these viewpoints are also informed by or derived from personal experience. Most of the chapters for the period after the Korean War fit into this category. These parts of the manuscript are particularly important due to the introspection of the authors regarding their experiences, and the meaning that this
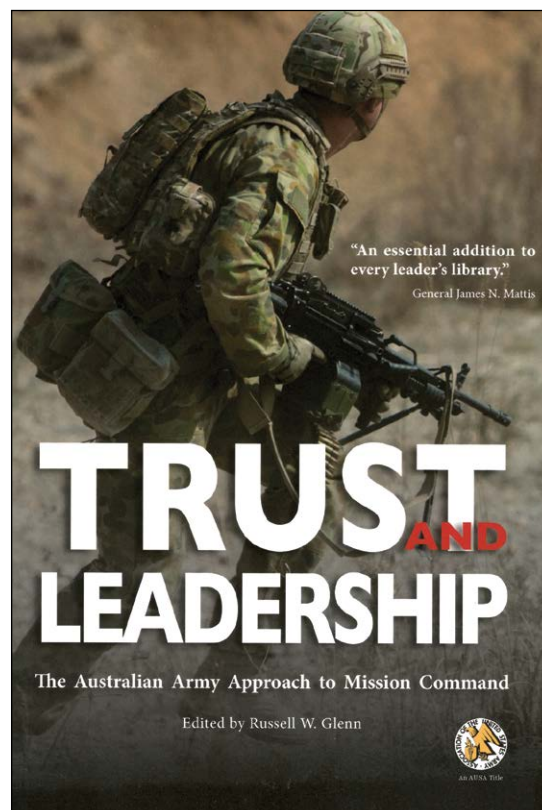
contemplation brings to their analyses. One chapter that is particularly interesting deals with the use of mission command in domestic operations. This is a mission command contextualization that has rarely been studied, and indeed, reflects the unique command and leadership insights provided within this edited collection.

Overall, the book certainly presents a sound, scholarly – and professional - analysis of key issues related to the historical development and contemporary challenges of mission command from an Australian, and, to a degree, the United States Army point of view. While there is less primary source work than would normally be done for a purely historical analysis – the breadth and depth of overall research, as well as the amount of personal experience that informs the chapters, ensures that this work is of excellent quality and can be considered rigorous.

Mission command is a topic that is mostly of interest to an academic or professional military audience with foci in military, political, leadership, defence and security studies. This book would be a valuable contribution to those studying these topics. Also, the ease of access given by straightforward writing, well-defined concepts and interesting case studies make *Trust and Leadership: The Australian Army Approach to Mission Command* comprehensible to a large audience. Overall, it is a superbly-edited volume that is well-written, solidly-researched and tightly put together. It would be a worthwhile addition to the library of any reader interested in command and leadership, as well as in military history.

Colonel Howard G. Coombs, OMM, Ph.D, *an infantry officer and long-time Army reservist, is an Assistant Professor at the Royal Military College of Canada, and is currently the Associate Chair of War Studies at the College.*

Rapid Instructional Design: Learning ID Fast and Right, Third Edition

by George M. Piskurich

Reviewed by James Cantafio

An experienced presenter, author, and leader in instructional design, George M. Piskurich has much to offer in his book, *Rapid Instructional Design: Learning ID Fast and Right, Third Edition*. Having presented at over thirty conferences and symposia, Piskurich has established a reputation based upon the mastery of proven methods of teaching and effective learning techniques. With emphasis placed upon the importance of strong instructional design to achieve desired learning outcomes, Piskurich is the *de facto* modern day expert when it comes to explaining the theory and action behind the analysis, design, development, implementation and evaluation of instructional courses and programmes. In this keystone book on the subject of instructional design practice, Piskurich presents a fresh look at the systematic process associated with producing quality, effective, and efficient training and education.

Each of the 11 chapters in this 560 page paperback book reflects and aligns with the internationally-recognized model associated with a systems approach to producing training and education. Commonly known as ADDIE, the Analysis, Design, Development, Implementation, and Evaluation model serves as accepted standard framework for instructional design. While the ADDIE approach and process of instructional design has essentially remained core to effective instructional systems design or ISD, the author argues that what has changed over time is the need to deliver quality training and education sooner. More than ever, there is the need for instructors and organizations to produce learning results faster. Without focusing too much upon background theory, Piskurich shows the reader how to produce quality, effective, and efficient training and education solutions. Emphasis is centered upon meeting student and institutional goals by concentrating on those key elements of instructional design that are deemed critical for learning success.

This book is very practical and informative. Well organized, it serves both the novice and advanced instructional designer in a number of different ways. First, by focusing on process, outcomes, and performance over theory and discourse; the author provides simple, easy to use, and practical checklists. For example, there are checklists for learning evaluation, training cost estimates, and simplified training plan templates. These checklists can be further adapted to reflect different learning requirements.

Second, the book does not have to be read sequentially. Each chapter stands well on its own. When reading alternate chapters, context is not lost in appreciating the importance and relevance of instructional design from a systems perspective. Focus is therefore placed upon the immediate need; be it the design of a lesson plan, or the development of new deliverables, such as in class or online courses. Third, a number of lessons learned and best practices have been integrated throughout the book. Field tips, hints, shortcuts, and additional notes serve to share experience throughout the book, while applying context to the valuable tools, checklists, and templates presented. Finally, a comprehensive glossary presents a complete list of modern training and development related terms. Such terms and constructs are considered essential towards understanding, situating, and explaining instructional systems design requirements.
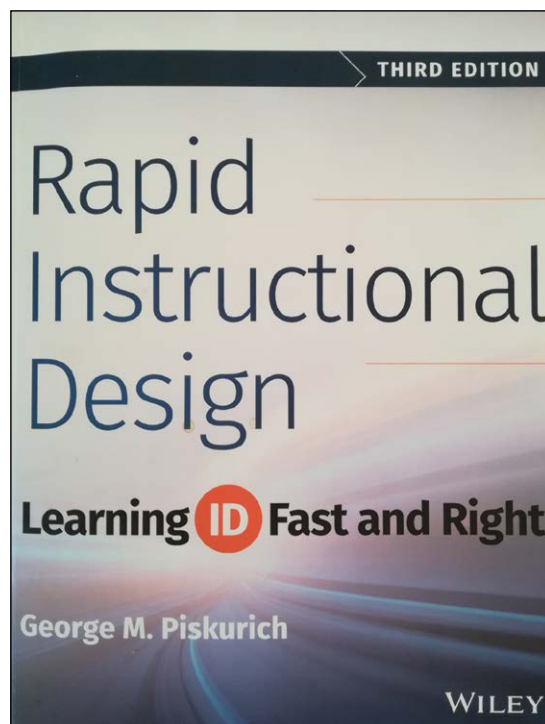
Piskurich stresses the importance of strong instructional design to the learning process. This is clearly articulated through a solid collection of proven best practice, repeated lessons learned, and critical approach to stress the importance of strong instructional design in the learning process. Each chapter shows that regardless of changes in learning technologies, new approaches to teaching, or advances in testing methodology; adhesion to tried-and-true, time-tested principles of good instructional design ultimately count when it comes to creating effective learning. In other words, instructional design is, and remains, key to learning.

Although it has been five years since its publication, this book continues to have strong relevance towards advancing military training and education, including within the Canadian military context. Training and education within the Canadian Armed Forces (CAF) is, and continues to be, based upon the ADDIE model. Known within the CAF as the Canadian Forces Training and Education System (CFITES), these principles and guidelines remain fundamental in the effective analysis, design, development, conduct, evaluation and validation of training and education programmes for the CAF. It is by adhering to the

principles and practice associated the ADDIE model that CFITES continues to be as relevant today, as it was over twenty years ago. In essence, strong instructional design remains paramount to learning success. This book serves as an excellent resource for both the CAF instructional designer and instructional staff.

Lieutenant-Commander James Cantafio *is a senior Training Development Officer and Human Resources Manager, currently working at Canadian Army Headquarters G1 Personnel Policy. Semper viam meliorem quaerentes. (Always seeking a better way: Motto of the Training Development Officers Branch).*

Churchill: Walking with Destiny

by Andrew Roberts
Penguin Books Ltd., 2018
CDN$54.00 HC, CDN $12.99 Kindle

Reviewed by Bruce Lyth

The words of the old lion haunt us still. When I was in high school, an eccentric candidate for student council president campaigned by papering the school with posters bearing his name alongside assorted Winston Churchill quotes from the war. Alas, we lacked beaches on which to fight in the hallowed cause of reorganized cafeteria seating, and so the candidate was defeated. Some twenty years later, it seems less common for politicians to orate badly in the Churchillian mode, or even to label as 'appeasement' opposition policies that are 'misliked.' This bittersweet development may be due to the more censorious mood of our present moment.

How are we to assess so complicated a person? King's College London-based historian Andrew Roberts has supplied a superb biography to aid in that task. *Churchill: Walking With Destiny* is admiring of its subject, but honestly presents his many misstatements, bogus predictions, and grotesque fondness for a dying imperialism. Indeed, the book's great strength is that it sings with the words of Churchill himself, with little intervention from Roberts' authorial voice. It is often funny; we learn not just of Churchill's quips in the Commons, but also of his quacks at his pet ducks from his deck at Chartwell, and of wife Clementine's worry for another pet bird's aerial 'indiscretions' indoors. It is often stirring; we feel the quietly-tense moments when the dovish Lord Halifax considers the premiership, and we are seized with the frenetic energy of Churchill finally walking into Number 10 Downing Street as the resident. Where Roberts' own voice does intercede, it is often—perhaps as a reflection of recent denunciations of Churchill—somewhat defensive. The reader is regularly informed that Churchill was actually correct about this prediction, or that action. The implication is that when considering Churchill's many and lately oft-quoted ill-chosen words, the reader ought to use the fullness of context to render a more forgiving judgment upon the man himself. In a rare misstep, this is a courtesy that Roberts does not extend to Mahatma Gandhi, when he quotes the Indian statesman's own poor words about Hitler as a means of somehow vindicating Churchill's views about India.

Perhaps most personally thrilling about *Churchill* is its portrayal of the role of language in Churchill's military leadership. As a young officer on the Afghan frontier, and in the Boer War, Churchill cajoled newspaper editors into employing him as a war correspondent (quite an appealing secondary duty to this humble staff officer). Roberts gives the clear impression that Churchill would have listed a command of language among the key elements of national power, alongside *Spitfires* and *Lancasters,* and coal and steel, along with the certain acceptance of a second brandy at lunch. The contrast with our present time is vivid. We now inhabit a literary wasteland wrought by decades of business management consultants intent upon 'corporatizing' the language and practice of public service. I suppose we can hope that archivists in generations to come will look back and say 'this was their finest quarter.' But *Churchill* ably spurs a hope that in studying Churchill's example we can summon some measure of his love of language in service to Canada. Roberts' Churchill shows that a military leader can charge towards victory by spilling the blood of fascists and the sublime words of Tennyson and Kipling and Shakespeare; he demonstrated that well-chosen words can supply young lads with the drive needed to climb aboard a bomber and attempt to shuffle Hitler off planet earth.

All that said, Churchill sometimes used his voice for ill. His racist invectives against Gandhi rankle in particular. Roberts falters in that he has an occasional tendency to pass off Churchill's instinctual sense of an inferred responsibility of the privileged to act with generosity and nobility towards those less privileged as an excuse for inexcusable opposition to home rule for India. It is a failing of both Roberts and Churchill that they do not see Gandhi as engaged in fundamentally the same struggle of defending the right of people to govern themselves, with Churchill wielding the weapons of the strong, and Gandhi the weapons of the weak.

Nevertheless, *Churchill,* in this reviewer's opinion, correctly prizes the power of human agency; this is no person merely floating in the current of a Victorian upbringing, or stumbling through the crevices of the tectonic structural forces of geopolitics. What a thrill it would have been to have observed Churchill when he
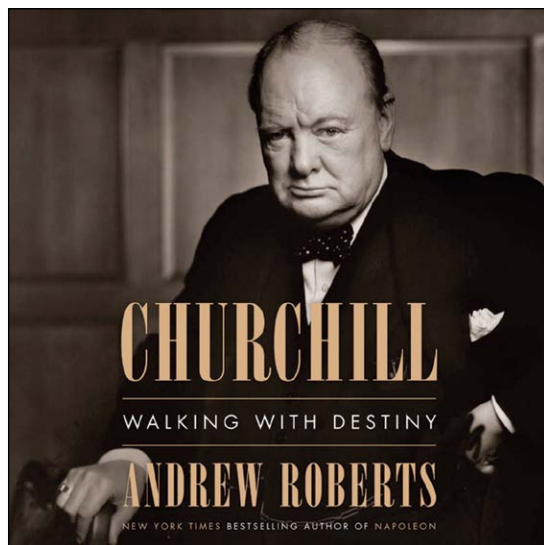
finally read *1984* and encountered the imperious O'Brien, who informs Winston Smith that, "…if you want a picture of the future, imagine a boot stamping on a human face—forever." As Roberts shows, Churchill's contribution to our civilization is to say to hell with all that. He made our almost-instinct almost-true: namely, that the totalitarian boot can be successfully resisted if one has an iron voice and a resonant will. It is a lesson we would do well to remember in this structural time of relentless surveillance, capitalism, climatic upheavals, and massing populist furies.

So we return to the question of how to judge such a man, for a belief that an individual's words and actions matter suggests that he be held accountable for those words and actions. Roberts' biography shows that the stunning breadth of Churchill's life does not facilitate a simplistic judgement. Percy Bysshe Shelley called poets unacknowledged legislators, which I take to mean that poetry has the implicit power to shape how we think and act in the world, but in the winner of the 1953 Nobel Prize for literature, we find both a poet and an actual legislator. For my part, I question the usefulness of easy judgement when held above a full view of a person's life, and in the cause of public service, there are few substitutes for the study of history. As the Czech philosophical writer Milan Kundera put it, the struggle of man against power is the struggle of memory against forgetting. *Churchill* is a fitting act of memory.

Captain Bruce Lyth is currently employed as a staff officer in the policy section of the Canadian Special Operations Forces Command (CANSOFCOM). In 2019, he deployed to the Middle East as part of a Canadian contingent in the fight against Daesh. Prior to joining CANSOFCOM, Captain Lyth was an analyst with Canadian Forces Intelligence Command (CFINTCOM). He has also worked at Canadian Forces Base Comox as an Analyst supporting air operations. He holds degrees in political philosophy from the universities of British Columbia and Victoria.

The CH-148 *Cyclone* helicopter from Her Majesty's Canadian Ship Toronto, gets into position over the Mediterranean Sea while conducting diver deployment training during Operation *Reassurance*, 21 April 2019.

DND photo RP23-2019-0166-009 by Master-Corporal Manuela Berger