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Women and the Armed Forces: Inclusive Policies and Practices in Canada,
Australia and New Zealand

Operation Nanook: Purpose, Evolution and Future

Review Article: The Decline of European Navies: Lessons for Canada?



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CANADIAN NAVAL REVIEW

VOLUME 14, NO. 2 (2018)

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Email: naval.review@dal.ca Website: www.navalreview.ca Twitter: @CdnNavalReview

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Three of Norway's five **Fridtjof Nansen**-class frigates sail line-abreast during a fleet exercise off Bodø, Norway, in November 2017. How do European naval developments compare to Canada?

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Editorial

A Tilted Playing Field: Was the Fix in for the CSC?

In August 2018, a long-time *CNR* supporter contacted us and indicated that he was extremely unhappy about the bias that *CNR* was illustrating. He noted that *CNR* has published a number of articles and commentaries about the Type 26 option in the bid process for the Canadian Surface Combatant (CSC) – all favourable – but has published very little about the other two options.

We explained that *CNR* publishes material that is submitted; with the exception of the Editorial, we don't write the material. *CNR* itself is not in favour of one option or the other. However, our critic was quite right that *CNR* has published a lot of material about the Type 26. But that's because people submit material to us about the Type 26. That started us thinking and looking at other publications. Clearly the supporters of the Type 26 are very active in Canada. Less has been published about the other two options. What does that mean?

The media has reported that certain of the bidders in the CSC competition suspect that the process has been rigged in favour of BAE's Type 26 contender. Why has this suspicion arisen, and is there any evidence to support it?

The contenders for the CSC contract are the following:

- Netherlands: Alion-JJMA, *De Zeven Provinciën-*class frigate;
- Spain: Navantia-Saab, F-100/F-105 *Christopher Columbus*-class frigate; and
- United Kingdom: Lockheed Martin/BAE Systems, Type 26 frigate.

Let's look at some of the parameters that the government set out for the CSCs. According to the Department of National Defence (DND), the CSCs should be able to conduct a broad range of tasks, in various scenarios, including:

- decisive combat power at sea and support during land operations;
- counter-piracy, counter-terrorism, interdiction and embargo operations for medium intensity operations; and
- the delivery of humanitarian aid, search and rescue, law and sovereignty enforcement for regional engagements.¹

That's a fairly broad list of tasks which many ships could meet. But there are more specific requirements. In 2016 the Commander of the Royal Canadian Navy, Admiral Ron Lloyd, listed some of the requirements that have been set for the CSC. They include:

- 127-millimetre gun;
- Speed;
- Crew accommodations from 165 to 200;
- Anti-surface warfare capability, much like the RCN has in the frigates;
- Long-range air defence capability, much like what is in the *Iroquois*-class;
- Anti-submarine warfare capabilities;
- Capacity to carry Cyclone helicopters;
- Passive and active decoy systems; and
- Medium-range radar.²

This list seems reasonable. And, again, all of the contenders seem capable of meeting most if not all of these requirements.

But one of the original elements of the government's requirements was that it wanted ships that were already in existence – not 'paper ships' that were in design but that did not yet exist. On 13 June 2016, the Minister of



Frigate face-off: Dutch HNLMS **De Ruyter** (left) sails past Spanish ESPS **Cristobal Colon** (right) in the Mediterranean Sea on 2 September 2018. Both are the base designs offered by Alion and Navantia for the Canadian Surface Combatant, respectively.



HNLMS De Zeven Provincien (F 802) was another possible design option for the CSC, 13 July 2009.

Public Services and Procurement announced that only those companies with existing, proven designs and actual hulls in the water would be allowed to bid in an effort to streamline the CSC procurement process.³ The rationale for this decision was to reduce program risk, constrain costs and speed up the process by upwards of two years. At the time, Irving's President, Kevin McCoy, supported this proviso and argued that it could save time and money in the CSC construction program.

BAE was one of the pre-qualified shipbuilders in Canada's frigate replacement project and this was despite the fact that, at the time, a contract for its Type 26 had yet to be awarded. In this sense, the Type 26, whatever its merits on paper, was an unproven design. It should be noted that this consideration disqualified BAE from entering its Type 26 in the current US Next Generation Frigate FFG(X) Program competition. The USN required bidders to enter only 'mature' designs already in production with the US or foreign navies to reduce costs, time and risks.

Nonetheless, despite not yet being in existence, the Type 26 is what everyone is talking about in Canada. The proponents of the Type 26 argue that the ships *will* be in service by the time Canada begins the build – as the United Kingdom has begun building them, and Australia just selected the Type 26 option for its new frigates.

But what about the other options? Why is no one talking about them? And what are their qualifications for the project? Navantia Chairman Esteban García Vilasánchez said that the team's proposal is based on the F-105 frigate design for the Spanish Navy. The option is, according to the

Navantia-Saab team, "a state of the art, proven operational warship, a version of which is already in service with the Royal Australian Navy." The frigates incorporate ballistic resistant steel in the hull, and power plants mounted on antivibration mounts to reduce noise and make them less detectable by submarines. The ships are fitted with American Aegis weapons technology, one of the few non-US warships to carry the Aegis Combat System. The Navantia Chairman states that "[t]his modern Anti-Submarine Warfare ship will incorporate Saab's globally recognized 9LV Combat Management Systems (CMS), elements of which are in service on over 240 platforms in 16 navies across the globe, including Canada's own Halifax class frigates." In February of 2018, it was announced that a design based on this class was selected as one of five finalists for the US Navy's FFG(X) program.

What about the other option? Bruce Samuelsen, Chief Operating Officer for Alion, says "[o]ur solution delivers an effective, affordable, production-ready 21st century naval capability to meet Canada's defence needs." The *De Zeven Provinciën*-class frigates have been in production and service for 10 years and it is thus a proven design. They are air-defence and command frigates currently in service with the Royal Navy of the Netherlands. These ships are apparently optimized for anti-aircraft warfare, and are equipped with an advanced sensor and weapons suite, but they also have weapons on-board capable of attacking surface and submarine targets.

Both ships are existing, functional ships. They are in use in other navies. The proposals include promises to work with Canadian companies and suppliers and to provide jobs to Canadians.

But then came a change of mind. A few months after its announcement that only existing/mature designs would be considered, apparently in response to lobbying, the Canadian government reversed itself and allowed BAE's Type 26 frigate to compete on the grounds that all of the bidders, in effect, would be offering new, 'Canadianized' designs. Media reports suggested that some Canadian companies were concerned that there would not be enough quality work – and jobs – for them if the government simply opted for an existing foreign design. This reversal seemed to indicate that henceforth 'Canadian content' (jobs and technology transfer) would take precedence over accelerating the construction schedule and reducing CSC program costs.

This is not a trivial matter. Irving officials have admitted their concern over a growing production gap between the completion of the Arctic Offshore Patrol Ship (AOPS) program, now scheduled for some time in 2022, and the cutting of steel for the first of the CSC ships. Irving had originally planned for the latter to begin in 2020, but now hopes this can commence in 2023. To bridge this gap, Irving has been lobbying Ottawa for several stop-gap projects, ranging from building joint support ships, humanitarian assistance/disaster relief ships, icebreakers and/or more AOPS. These options are problematic because the RCN has not stated a requirement for them, and Ottawa has not set aside funds to construct the ships.

We also know that the final CSC bid 'cure' process was delayed. This has led to media speculation that the main reason for the delay was to permit the Type 26 team to bring its CSC proposal more in line with Ottawa's technical and other requirements. Notably, both of the other two bidders stressed the maturity of their operationally proven designs when they submitted their proposals in early December 2017.

Another factor contributing to the impression that BAE's Type 26 had the inside track in the CSC competition lies in the propensity for military planners of all stripes, including those in the RCN, to favour the latest in technology when procuring new equipment. Of course the services want the latest and greatest capabilities on offer. This penchant for acquiring the 'all singing, all dancing' best is understandable, especially in the Canadian context the navy knows that whatever warship Ottawa ultimately selects, the RCN will have to operate it for 30-40 years. This reality naturally predisposes navy planners to prefer the design with the best current technology and also that which promises the most future growth potential and 'future proofing.' Therefore, a ship design such as the Type 26 - even though the first of its class will not be completed in the United Kingdom until 2025 at the earliest - holds much greater allure than those of the other two bidders, whose ships have been operational for a decade or more already.

Supporters of 'paper' designs like BAE's Type 26, can and do make claims respecting the superior capabilities of their offering simply because nobody can prove them wrong – yet. But history has shown time and time again that, even for an eventually successful warship such Canada's current *Halifax*-class frigates, things do go wrong even in the best managed warship construction programs – especially for the lead ship of that class. It is not until a



HMAS **Hobart** fires a Harpoon Blast Test Vehicle in the East Australian Exercise Area on 30 November 2017. **Hobart** is based on the same Navantia design being adapted for its submission for the Canadian Surface Combatant.



From left: HMCS Ville de Québec, ESPS Cristobal Colon and HNLMS De Ruyter sail in formation in the Mediterranean on 2 September 2018, during Operation

Reassurance

ship is actually in the water during operational trials that the inevitable glitches in design and manufacturing are discovered and then are rectified, particularly with respect to the complex combat system integration process. The litany of problems recently encountered in the US Littoral Combat Ships and the *Zumwalt*-class destroyer, the Australian Air Warfare Destroyer, and the German *Baden-Wurttemberg*-class frigate (which the German Navy flatly refused to accept) are too numerous to analyze here. All these examples reflect the pitfalls of proceeding with overly ambitious designs. Collectively, these examples should be a cautionary lesson for Canada.

Add to this the fact that BAE, with its design selected in the CSC competition, will be trying to manage three (the UK and Australia are the other two) separate, and slightly different, Type 26 variants simultaneously. And all three programs will be proceeding in roughly the same timeframes, meaning the lead ship for each country will be completed and hitting the water at roughly the same time. Only then will we find out whether the design and construction techniques are sound. In other words, Canada will have little time to learn from the experience of the others – and if there are problems with the Type 26, Canada will be too far along the construction process to do much about it. Furthermore, it is unlikely that Canadian companies, as the last to join the production queue, will have much opportunity to garner significant benefits by supplying major systems and components to the United Kingdom or Australia Type 26 production lines and supply chains.

What is the answer? Why was there little talk about the Spanish and Dutch options and so much talk about the British one? Was it the language difference – i.e., the Type 26 information is in English and easily accessible in Canada? *CNR* is certainly guilty of publishing more material about the Type 26 than the other options. But what does

this signify? It means that people are writing and submitting material about this option but did it mean that the fix was in?

We are not saying that the Type 26 will not be a great ship. What we are saying is that it is as yet unproven – even if two other countries have selected the design – and the government's original plan to consider only existing, mature designs was probably a wise one. And we don't know if the process was tilted in favour of the Type 26 but there does seem to be a certain sense of inevitability to the selection of this option. We've had discussions with Type 26 supporters who say that if the government does not select it, it would be a travesty.

The selection process was by all accounts being scrupulously fair as it went through the proposals. But now that Ottawa has selected the Type 26, it would appear that the *potential* for job creation and superior performance trumps cost and schedule delivery considerations in the CSC competition. \$\\\$

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Dr. Ann Griffiths Dr. Danford W. Middlemiss

Women and the Armed Forces: Inclusive Policies and Practices in Canada, Australia and New Zealand

Isabelle Caron and Sébastien Girard Lindsay



Lieutenant (Navy) Jackie Geiger and Lieutenant (N) Gillian Herlinger listen as Naval Communicator, Leading Seaman (LS) Kenneth Powell-Duvall relays a signal while Lieutenant (N) Cassandra Fogarty takes a bearing as HMCS **Vancouver** prepares for a replenishment at sea during RIMPAC 2018.

Canada, Australia and New Zealand are very interested in increasing the number of women in their armed forces. Both Canada and Australia have been somewhat successful in this and both have recorded an increase in the proportion of women in recent years. In Canada in 2016, 15% of the members of the armed forces were women, an increase of 3.6% from 2011.¹ In Australia in 2017, 16.5% of the Australian Defence Force (ADF) were women, compared to 14.4% in 2013.² In New Zealand women represented 15% of the armed forces in 2013, the most recent year for which figures are available, and that proportion has been the same for the past 10 years.³

These states face similar issues undermining the effective integration of this segment of the population into their ranks. They have developed similar policies to improve the representation of women in the organization. In this article, we will briefly examine the four main categories of public policies designed to address discrimination and increase the presence of women in the armed forces. These include policies on recruitment, promotion, sexual harassment and family support. Our review of these government measures will be based on official documents from each country.

Recruitment Measures

Several factors explain the gradual increase in the proportion of women in the military. First, there have been demographic changes affecting the traditional personnel (i.e., young white men). There just are not enough of the



Royal New Zealand Navy Commander Sandra Walker is the commanding officer of the supply ship HMNZS Endeavour.

traditional recruits to fill all the positions in the military. This, among other reasons, has prompted the authorities in these countries to promote the integration of women to fill the growing labour shortage. Second, technological advances in weapons systems and equipment, reducing the need for physical strength on the part of users, also partly explains the increase of the number of women in the armed forces. Third, there have been judicial decisions in these states that allowed women to join the armed forces, or directed the authorities to step up recruitment. For example, in 1989 the Canadian Human Rights Tribunal directed military authorities to complete the integration of women into the armed forces in all fields and occupations within a 10-year window. As well there are international conventions that have paved the way for the integration of women into the military. Article 1 of United Nations Security Council Resolution 1325, for instance, provides that states must "ensure increased representation of women at all decision-making levels in national, regional and international institutions and mechanisms for the prevention, management, and resolution of conflict."4

Although some progress has been made, the armed forces of these states have proposed recruitment measures to increase the number of women in service. For example, New Zealand has set a target of 30% female applications by 2025. To this end, the number of female officers is to be increased by 1% by 2018. To facilitate the success of their physical entry test, a Force Fit 2 App will be put in place to track their progress and set targets to achieve their goals. Similarly, new recruits will be mentored through the selection process. Efforts will also be made to increase the number of introductory physical training sessions. With regard to recruitment campaigns, the armed forces will adopt gender-neutral language and target job fairs specifically to address women in the armed forces.

An interesting aspect of this strategy is the objective of identifying and removing all barriers to recruitment for older female military personnel. As well, the government of New Zealand is seeking to increase the recruitment of women into combat occupations.

As part of its new defence policy released in June 2017, Canada has also set specific recruitment targets to "increase the proportion of women in the military by one percentage point annually, to achieve 25 percent representation by 2026." Canada has also launched several initiatives aimed at ending discrimination rather than granting privileges to a specific group of individuals. To increase the representation of women in the armed forces, the Canadian government is establishing links with women's professional associations, educators and students, in addition to participating in job fairs aimed at women. The CAF also participates in and supports the four Defence Advisory Groups established under the Employment Equity Act.

Australia's measures are mainly aimed at addressing discrimination rather than putting in place standards for positive discrimination. However, Australia has introduced a recruitment campaign specifically targeting women. The Australian Air Force, for example, is introducing a

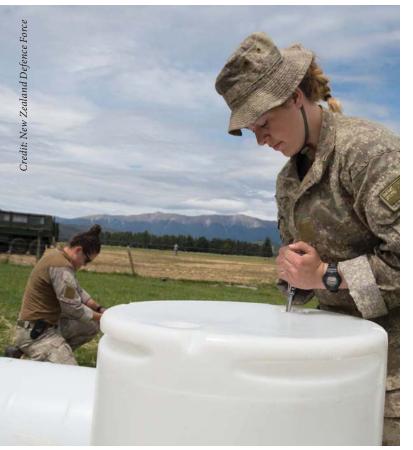


Royal Australian Navy sailor, Leading Seaman Boatswain Mate Jasmin Butler briefs Royal Canadian Navy Lieutenant Kevin Chung during a live fire exercise on HMAS **Adelaide** during Indo-Pacific Endeavour 2018.

program to remove the minimum service time requirement from enlistment contracts. Similarly, the country has set up a pilot induction program, during which a pilot camp specifically targets women. The program also seeks to support women through the recruitment process as part of the *PropElle* guide for all candidates.⁷

Promotion

Promotion of women in the armed forces is another battlefield for achieving employment equity and enhancing recruitment. Without the possibility of moving up the ranks via promotion, the armed forces will not be able to retain women who are recruited. To increase the number of females in high ranks in the armed forces, New Zealand has set specific targets to fill leadership positions with more women. For instance, by 2025 the New Zealand Army wants 20% of sergeants and warrant officers to be women. As far as senior officers are concerned, New Zealand wants 20% of Lieutenant-Colonels to be women. To achieve this objective, the number of women in these ranks is to be increased by 2% annually. Moreover, under the More Military Women program, the government will seek to establish a Male Champions for Change coalition aimed at influencing public policies on equity within



Private Chrissy Kelly, a Movement Operator from 5 Movements Company, New Zealand Army, packs up an aerial drop near Saint Arnaud, Tasman Region, New Zealand, during Exercise Southern Kapito, 8 November 2015.

the Department of Defence. The government also wants to establish a gender diversity advisor in the military, strengthening the diversity framework and promoting gender education.⁸

New Zealand will set up training sessions to examine and address unconscious biases on merit committees which are responsible for deciding on promotions. Similarly, it will establish a minimum threshold for gender-based appointments in short lists, when all employment criteria are met by potential candidates. These measures are part of the New Zealand government's commitment to removing bias in career management practices.

Canada does not have such a clear target with respect to female promotions but it does participate in NATO's Gender Committee, which focuses on ensuring the effective implementation of Security Council Resolutions regarding women. In addition, since 1976, this committee has facilitated information exchange among NATO members with respect to gender-related policies, and ensured coordination and collaboration with international organizations and agencies involved in the integration of a gender perspective in the military context.⁹

Sexual Harassment

If recruitment and promotion are to proceed as planned, then the armed forces need to deal with the problem of sexual harassment. There have been numerous cases discussed in the media of women being treated badly by their colleagues in the military. Programs have been put in place by Canada, New Zealand and Australia to address sexual harassment issues in the armed forces. Up until recently, women have been reluctant to report their experiences of harassment or sexual assault because of the military's organizational culture, fear of isolation or ostracism, safety threats, and lack of confidence in the chain of command.

In response to complaints from women in the military in Canada, Operation Honour was established in 2015 to eliminate inappropriate sexual behaviour in the Canadian Armed Forces. As part of this operation, a Strategic Response Team on Sexual Misconduct was established to conduct a progress audit. This team's mandate covers three specific areas: policies; performance measures; and awareness training. With regard to the latter, awareness training is provided to all military personnel to inform them of the zero-tolerance policy regarding inappropriate sexual behaviour. As well, the CAF has established a Sexual Misconduct Response Centre (SMRC), independent of the chain of command, to support victims of sexual assault. This centre "is the first-ever dedicated independent support centre for [Canadian Armed Forces] members. The SMRC has been established to provide victims the



Commodore Craig Skjerpen (centre) presides over a Change of Command ceremony on 18 September 2018, wherein Commander Nancy Setchell (right) takes over HMCS **Charlottetown** from Commander Nathan Decicco.

option of reaching out for information or support without automatically triggering formal reporting and the subsequent investigative and judicial processes that may follow."¹⁰ Military personnel who are deployed also receive training on the military code of conduct, human rights, ethics and behaviour, and gender and cultural differences.

New Zealand has adopted similar measures. *Operation Respect* has been implemented as a model response to sexual assault, including an anonymous reporting system, a team of professionals who respond to cases of harassment or sexual assault, and courses in ethics and healthy relationships for all members of the armed forces. As well, the staff has held several town hall meetings across bases and camps to discuss inappropriate sexual behaviour. A review of the number of complaints and problem behaviours is systematically and regularly conducted, and the chain of command includes a team of three or four experts to advise on this matter. A protocol on handling sexual harassment and assault cases with the military police has also been instituted.

The Australian Department of Defence has responded to the issue of sexual harassment and assault by establishing a sexual harassment prevention and response line. The line is open 24 hours a day and allows the member to report incidents outside their chain of command. The Defence Department has also developed a guide describing the ethics and behaviour expected from military personnel in the workplace. The Ministry of Defence has established equity advisors to support the development of policies and day-to-day administrative decisions. Finally, a guide is provided to all employees regarding workplace bullying and harassment.¹¹

Family Support

One of the major obstacles to the effective recruitment and integration of women into the armed forces is the lack

of family support measures and the difficulty of balancing military life with motherhood. Several studies have noted that there is a belief in some military organizations that in the navy, a woman's pregnancy is an excuse not to be sent to sea.¹² Similarly, others believe that the cost of maternity leave is too high for the organization. These types of beliefs might lead military organizations to maintain a double standard - while a man is free to have children and pursue a military career, a woman is impeded by motherhood. Studies of women's motivations to join or leave the military indicate that women frequently leave the military when they start having children.13 Indeed, the separation from children during an overseas deployment is a very difficult experience for military women (and for men as well). As a result, Canada provides maternity leave in its parental supports, but remains vague about other measures adopted to make life easier for women with children.

New Zealand seeks to make the attrition rate and the commitment index equal between men and women – i.e., to ensure that women do not leave the military in greater numbers than men. To do this, the military has implemented parental leave policies and breastfeeding policies. It also established public-private partnerships to increase child care services. Similarly, the government wishes to appoint at least two women to all defence headquarters and Social Services Governance Committees and set up audits independent from the chain of command to assess the organization's flexibility in balancing work and family.¹⁴

In terms of social benefits, two broad categories of measures have been adopted by the Australian government. First, the country has adopted a maternity leave policy that takes into consideration all stages of maternity, including the physical consequences of pregnancy for women, child-birth and recovery from childbirth. The Australian Defence Force Total Workforce Model (TWM), introduced in 2016, allows women to serve in different ways depending



Royal Australian Navy officer, Lieutenant Kylea Jones, takes a bearing on the bridge of HMAS Newcastle during Exercise Kakadu 2018.

on their stage of life. For example, they can convert their full-time service to part-time service by transferring to the reserve. However, in terms of retention, men still have higher retention rates five years after their paternity leave (76.8%), compared to women (62.3%). Second, the Ministry of Defence has 22 early childhood centres available for its members.

Conclusion

This article presented the results of a preliminary research project aimed at mapping the various initiatives and policies led by governments with respect to female recruitment in the armed forces. It briefly examined an inventory of policies and measures aimed at increasing the number of women in the armed forces and retaining them. We have compared the various initiatives implemented in three specific countries: Canada, Australia and New Zealand. Despite some differences across these countries, this comparison shows that the overall measures are in fact very comparable and lead to similar results in terms of proportion of women in the armed forces. As all these initiatives and policies are interconnected, it is important to understand the existing dynamic between these policy instruments and to assess policy coherence to ensure that it leads to positive results.

This preliminary research is a starting point for undertaking more in-depth research on the existing inclusive initiatives and policies in the armed forces. These programs are fairly recent so it may be too early for conclusions, but it is relevant to question the nature of these initiatives and begin the examination of their real effectiveness.

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Isabelle Caron, PhD, is an Assistant Professor in the School of Public Administration at Dalhousie University in Halifax.

Sébastien Girard Lindsay is a PhD student in Public Administration at the University of Ottawa.

Operation Nanook: Purpose, Evolution and Future

Adam Lajeunesse

Since its inception in 2007, Operation Nanook has been the Canadian Armed Forces' (CAF) largest and most complex northern deployment. In Nanook, an annual joint, combined interagency operation, at least one major surface combatant has been deployed north of the Arctic Circle, accompanied by army and air force units working cooperatively to practice integrated responses to a myriad of defence, safety and security scenarios. The exercise, long the centrepiece of Canada's northern training, is undergoing a shift under the current government. From an annual big-ticket display to a series of smaller, more focused exercises, the re-imagining has the potential to keep what has long made the operation useful, while pruning out some of its less efficient elements.

In many ways, *Nanook* has been misunderstood, tied into aggressive rhetoric which highlights a traditional sovereignty and security framework in which presence and power projection defend the Arctic and preserve Canadian sovereignty. It is an easy mistake to make given that most of the media and images flowing from the exercise focus on CAF assets and combat exercises. While the frigates and CF-18s make for excellent photo opportunities, the heart of the endeavour has always been its cooperative, integrated, 'team-building' aims, geared not towards Arctic warfare but the higher probability safety and security threats now emerging in the far north.

The honing of Canada's 'whole-of-government' (WoG) interoperability in the Arctic is what really defines *Operation Nanook*. This operational concept is predicated on enhanced horizontal coordination between government departments and agencies (and, in some cases, non-government stakeholders) to cut across traditional institutional silos, leverage a holistic, cross-boundary perspective, and achieve a shared goal. Because Canada has such limited resources in the Arctic – both in terms of personnel and equipment – this combination and sharing is essential.

The election of the Liberal government in 2015 ushered in a dramatic shift in how *Nanook* is structured and, through that restructuring, what it is intended to accomplish. Rather than an operation with a fixed timeline, the Liberals have changed *Nanook* into a year-long umbrella, encompassing multiple exercises and operations across Canada's north. The shift has left the core of *Nanook* intact, namely the WoG-driven focus on safety and security



The Danish ocean patrol vessel HDMS **Væderren** fires at a Hammerhead surface target drone during a joint gunnery exercise with the Royal Canadian Navy as part of **Operation Nanook** 2018, 14 August 2018.

threats, however the change promises to add a certain flexibility, while also reshaping the brand to a more strategic purpose.

This new vision of *Nanook* is a welcome evolution, and well suited to a CAF with purpose-built Arctic platforms and more sustainable Arctic capabilities. Now more than 10 years old, the exercise is maturing into something more permanent and all-encompassing. It's an important shift. As physical and economic changes in the Arctic accelerate, and new actors make serious efforts to build inroads into the region, the CAF will need to view the region with that kind of lens.

The CAF returned to regular, large-scale Arctic operations in 2002 after a lengthy hiatus following the end of the Cold War.² This movement, which accelerated through the first decade of the 21st century, was motivated by some of the new realities created by climate change and the concerns that went along with them. The Northwest Passage, long unnavigable to all but icebreakers, was becoming increasingly accessible. Meanwhile, oil, gas and mineral deposits



A Hammerhead target drone is launched from HMCS **Charlottetown** during **Operation Nanook 2018**, 14 August 2018. Although such warfare elements have long been a part of **Operation Nanook**, the operations overall tend to focus on peacetime emergency problems.

appeared increasingly attractive to development. The longstanding legal disagreement between Canada and the United States over the status of the Northwest Passage cast all these activities in a threat narrative, as academics warned that Canada's sovereignty might be "on thin ice."

The initial response to the increased accessibility of the region, and the accompanying international interest, was CAF focused and led. HMCS *Goose Bay* and *Summerside* were deployed to *Operation Narwhal* in 2002 and HMCS *Montreal* and CCGS *Henry Larson* in 2004. It was a matter of dipping a toe back into the Arctic waters, practicing communications, logistics, movement and interoperability with the air force, coast guard, army and Canadian Forces Northern Area HQ. Reporting on *Narwhal* often focused on the need for the military to 'protect' sovereignty from foreign intruders. *Operations Hudson Sentinel*

(2005) and *Lancaster* (2006) followed and turned northern operations towards a more WoG framework. These exercises marked the origins of Canada's integrated approach to northern operation as the CAF coordinated with the RCMP, the coast guard and others to build a broader approach to Arctic security.⁴

This WoG approach stemmed from an understanding that most future threats to the Canadian Arctic would be on the safety and security (rather than defence) side of the spectrum, and that the CAF would not necessarily be the lead agency in addressing these. Despite this realization, Arctic operations were still CAF organized and led, with other government departments invited to play small roles where and when needed. *Nanook* was started in 2007 as a regular training exercise – although it was labeled an 'operation,' both to vest it with a dedicated funding line in the budget and because the presence it brought to the Arctic was seen as having a real effect on Canada's ability to control the region.

Operation Nanook immediately became Canada's premier WoG exercise at a time when the need for a more comprehensive approach to the Arctic was obvious. During the 2007 Speech from the Throne, the Stephen Harper government outlined a vision for the Arctic that went beyond the traditional sovereignty and security frames which had, up to that point, dominated the conversation. In that speech the government promised to "bring forward an integrated northern strategy focused on strengthening Canada's sovereignty, protecting our environmental heritage, promoting economic and social development, and improving and



Canadian Army members exit a CH-149 Cormorant helicopter in Yellowknife during Exercise Ready Sotaria on 17 September 2018, which simulates a major air disaster. The exercise falls under the new broadened scope of **Operation Nanook**.



HMCS **Charlottetown** off Iqaluit on 20 August 2018. The **Halifax**-class frigates have been a frequent presence during **Operation Nanook** over the years, illustrating the centrality of broad-spectrum maritime capabilities in the Canadian Arctic.

devolving governance."⁵ That approach was clear in the early *Nanooks* which were described in language far less focused on threats to Canadian sovereignty and security, and showed a clear movement towards a more nuanced understanding of unconventional safety and security challenges.

Peter Van Loan, Minister of Public Safety at the time, spoke of Nanook 2009 as having "allowed us to continue to build strong emergency management capacity in the North." In articulating the mission focus, he suggested that "exercises like Nanook provide a valuable opportunity for participants from all levels of government to train together so that we can respond to threats and natural disasters in a coordinated manner."6 Minister of Defence Peter MacKay who, by virtue of his portfolio, could have been expected to place a more hard security slant on the operation, congratulated the CAF on successfully achieving "their aim of demonstrating and improving upon their capabilities to respond to safety and security challenges in our Arctic."7 In separate speeches, he emphasised the CAF's ability to "provide humanitarian and disaster assistance"8 and respond to "emergencies in support of the territorial government."9 The reality of this mission was brought home in 2011 with the crash of First Air Flight 660 near Resolute, quickly turning Nanook 2011 into a genuine rescue mission.

Looking for that integrated effect defined *Operation Na-nook*, although it was a difficult proposition. Successive operations demonstrated just how difficult it was for the CAF to work in an integrated environment. Not only were there technical issues in planning and communicating

Operation Nanook: Training Patterns and Objectives

YEAR	PRINCIPAL TRAINING SCENARIOS
2007	Drug interdiction, oil spill
2008	Maritime disaster, oil spill
2009	Anti-submarine warfare, patrols, downed unmanned space vehicle retrieval
2010	Oil spill, amphibious operations
2011	Surveillance patrol, major air disaster
2012	Police assistance, trespassing ship
2013	Wildfire, poaching, police assistance
2014	Search and rescue, cruise ship grounding
2015	Oil spill, safety training
2016	Earthquake, search and rescue, combat exercises
2017	Community consequence management and crisis response

Source: Data from Department of National Defence, "Operation Nanook," http://www.forces.gc.ca.

with other government departments, but the operational cultures of the military and civilian agencies were so different that frustrations soon led to as much CAF direction as cooperative planning.¹⁰ The military's culture is to fill voids in planning and, since many other departments lack the CAF's planning apparatus, the military slipped in to fill those voids. Other departments also lack the military's sizable training budget and its ability to remove valuable personnel from their day-to-day jobs for training purposes. As a result, *Nanook* traditionally placed the CAF in a leading role, which it would not have in most real crises.



Former Prime Minister Stephen Harper is seen here on board a Zodiac inflatable boat off Resolute during **Operation Nanook** in 2010. Perhaps the close interest paid by the Prime Minister, ironically, decreased the utility of the operations as planners sought to reduce uncertainties and risk elements.

Part of the problem was the optics of the operation. As a showpiece, *Nanook* was more than training, it was a visual demonstration of Canadian sovereignty and control in the north. It had to look good and be seen going off well. A political element came into play here since Prime Minister Harper personally attended each *Nanook* with a small entourage. Harper had used Arctic sovereignty as an election issue and was consistently engaged on the issue, likely doing more than any Prime Minister since John Diefenbaker to emphasize the importance of the Arctic and the need to defend it.

There was some benefit in that personal focus. The region received more attention than it otherwise would have, and the CAF were driven to place more resources into building Arctic capabilities. The drawback, however, was that this political presence distracted from broader training objectives. As *Nanook* progressed, more and more attention was devoted to managing VIP visits.¹¹ These visits also encouraged the military to plan away any of the friction and unpredictability which would inevitably dominate a real-life Arctic emergency. For that reason, and to ensure smooth logistics in the north, planning had to take place 12 to 18 months in advance. This meant that *Nanooks* were large, centralized affairs running a limited number of scenarios, into which many government departments

had difficulty fitting. These structural flaws limited the exercise's ultimate potential.

In October 2015, Justin Trudeau's Liberal Party won the Canadian federal election and one of the few shifts in Arctic defence that the new government made was to restructure the timing and organization of *Nanook*. In 2018 it was announced that *Nanook* would no longer be an annual two-week operation; rather, it would be an ongoing, year-round exercise with periodic deployments and events, undertaken by various government actors for different training purposes.

What that looks like in practice is still unfolding. *Nanook* 2018 was similar to those in years past and a new concept of operations will take time to work itself out. Nonetheless, the idea is sound. This spreading out of *Nanook* should make training times more flexible and enable more government departments to plug into exercises, many of which could become smaller, more focused and less logistically cumbersome. Lieutenant-Colonel Luc Frederic Gilbert, a Plans Officer at the Canadian Joint Operations Command explained the logic thusly:

Trying to have Public Safety, the Canadian Coast Guard (CCG), Public Health Agency of Canada and the territorial government all available at the same time to conduct an operation was often leading to limiting the amount of participation from our partners. Now, we are not limited to a strict window in August.¹²

Finding ways to involve so many government departments in a small suite of scenarios was sometimes awkward and a more dispersed approach will theoretically allow individual departments to plan and execute more focused exercises across a more dispersed area, and on schedules that will be more convenient to the essential actors. It will also offer a simplified planning process if the planning groups are broken down into smaller bodies with clearer objectives.

A downsizing of *Nanook* would also remove some of the media attention from the event(s). This removal of the public glare could have real benefits since it will allow the CAF and other government departments to look bad when need be. In 2015, for example, there was a suggestion from the coast guard to undertake an oil-spill exercise in which an RCN frigate played the vessel with a leak. The optics of that kind of scenario were considered awkward and the idea was rejected. That may have been an embarrassing role for the navy to play, but it would have been a useful exercise.

Removing the public eye from much of the CAF's northern exercises would also allow the CAF the freedom to fail. This was not an option during the large scripted *Nanooks* but will provide extremely useful lessons for the future.

Narwhal 2004 is an instructive example. There, the CAF intentionally set itself up for this kind of failure. Planners brought their forces to an area that they knew would cause difficulties. Runways around Pangertung were short and able to accommodate only small aircraft, steep fiords and uneven tundra made walking nearly impossible and communications difficult, while the isolated location far from CAF supply networks taxed logistical services to the breaking point.¹³ That was the point. The Arctic is hard to work in, detailed planning for an emergency is impossible, and the kinds of well choreographed manoeuvres undertaken during a typical *Nanook* are not repeatable in a real situation.

The change in government has also led to a de facto downgrading of the operation's political importance through the Prime Minister's decision not to attend each deployment. This will make planning easier and almost certainly make the exercises more useful. Prime Minister Harper's decision to participate was important when he was in office; it provided badly needed political support for Canada's developing Arctic capabilities and helped to keep the Arctic in the public consciousness, perhaps for longer than it has ever been. Now, however, the importance of the Arctic is solidified in CAF strategic thinking and within the government more generally. And, with new Arctic-capable naval ships coming into service, the time for that kind of constructive cheerleading has given way to a need for a more streamlined operational focus.



During the 2004 Exercise Narwhal, the Canadian Forces stretched the limits of their supply lines in order to train for worst-case scenarios. Taking place in and around Pangnirtung, Nunavut, air transport was limited to smaller aircraft such as these CH-146 Griffons.



As **Operation Nanook** is reconceptualized as a year-long operation, there may be a better opportunity to refine interagency cooperation in Arctic emergencies, such as this simulated casualty event near Rankin Inlet, Nunuvut, on 22 August 2017.

Operation Nanook has been an extremely successful series of exercises since its inception in 2007. In little over a decade, the Canadian Armed Forces have re-established a regular presence in the Arctic and are poised to expand capabilities as the military takes possession of its first Arctic-capable vessels since HMCS Labrador sailed under the navy ensign in the 1950s. Despite the sometimes noisy rhetoric calling for a militarization of the north, or warning of impending Russian encroachment, the CAF maintained the sensible focus on whole-of-government cooperation and unconventional security threats, and Nanook has been their vehicle for doing so.

The modernization of the exercise by the Liberals into something broader and more flexible is a good idea. It may offer a better framework for training, more streamlined planning and more effective interagency cooperation. How this shift will be undertaken and whether any of these benefits will be realized remains to be seen. It is clear, however, that the Arctic is not about to decrease in importance any time soon and, so long as the pressures of climate change and human activity remain, there will be a need for combined, joint operations in the Arctic.

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Dr. Adam Lajeunesse is the Irving Shipbuilding Chair in Arctic Marine Security at the Mulroney Institute of Government, St. Francis Xavier University, Antigonish, Nova Scotia.

Review Article

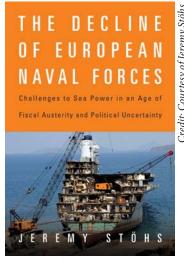
The Decline of European Navies: Lessons for Canada?

Jeffrey Collins

Canadians could be forgiven for thinking that debates over fleet recapitalization, shipbuilding, defence budgets, and capability-commitment gaps are as unique to this country as maple syrup. However, a new book from the US Naval Institute offers a telling comparison on how Canada's European allies have endured similar painful discussions on these subjects. Written by Austrian defence scholar Jeremy Stöhs, *The Decline of European Naval Forces* attempts to explain why European navies have been in decline since the collapse of the Soviet Union in 1991 and what this means in an era of increasingly nativist American foreign policy and the rise of new naval powers in the Asia-Pacific region.¹

Stöhs' argument is relatively straightforward, with 90% of global trade moving by ship, sea power – what naval historian Geoffrey Till referred to as the ability of a country to conduct maritime trade, use marine resources, deploy navies in the national interest, and use military force² – is crucial to European prosperity and security. The problem is that after the end of the Cold War complacency set in and a disconnect emerged. As Stöhs notes, "it appears as if many European governments no longer consider highly capable naval forces to be an essential element for the prosperity of their respective states." In his view, the key source of naval power is the size of the fleet because "the number of ships ... determines where it [a navy] can be at any given point in time."

The problem here is that 'highly capable naval forces' is never quite defined. It is inferred throughout the book that such forces are multi-purpose and are composed of a mix of surface combatants, aircraft, submarines and, if need be, carriers. Niche, specialized fleets are to be avoided. Without much elaboration, the technological sophistication of contemporary European navies are said not to be able to make up for the loss in total hull numbers since 1990. Given the cost of a modern surface combatant, it is not



Front cover of Jeremy Stöhs' **The Decline** of European Naval Forces.

clear how many hulls are ideal or how many trade-offs a government should make for naval acquisition at the expense of other military capabilities or national programs.

In Stöhs' view, maritime trade dependent European countries have lost sight of the value of navies in ensuring maritime-based prosperity. Denmark, for instance, is home to one of the world's largest commercial shipping companies and the Netherlands hosts the world's fourth largest port (by twenty-foot equivalent units), yet both countries have undertaken significant fleet reductions since 1990.



HMS Diamond, one of six Type 45 air-defence destroyers in the Royal Navy, sits pierside at Portsmouth naval base in January 2017.



The former HMS **Ocean**, recently sold to the Brazilian Navy and renamed **Atlantico**, anchors on 25 August 2018 in Rio de Janeiro for the first time after her Atlantic transit

With the United States positioning 60% of its fleet in the Asia-Pacific region amid that region's heightened nationalism and naval build-up, and a revanchist Russia in its own backyard, the capability gaps in Europe's navies have never been clearer. Relying on the goodwill of rising powers and American support, especially in the Trump era, to maintain the strategic lines of communication now appears especially short-sighted.

How the current circumstances came to be is the result of several factors, some of which Stöhs accounts for, others he does not. The chief factor was the end of superpower tensions in 1990-91 after what had been a long bloody century. Understandably, western European governments sought to capitalize on a 'peace dividend,' redirecting defence dollars to more popular domestic social programs. The collapse of the Soviet Union and the end of Moscowbacked authoritarian regimes also contributed to a widely accepted 'end of history' view whereby liberal capitalist democracies reigned supreme, a view further entrenched by the birth of the European Union in 1993 following the implementation of the Maastricht Treaty. That the United States continued its security guarantee after 1991 (via the North Atlantic Treaty Organization) gave European

governments further incentive to slash military budgets.

Although the 9/11 attacks temporarily reversed the overall decline in defence spending, much of the new money was allocated to support the costly US-led ground wars in Iraq and Afghanistan. Stöhs characterizes this focus on counter-insurgency and counter-terrorism as contributing to strategic short-sightedness, or 'sea blindness,' undermining those few naval procurement projects some governments had planned. For example, the UK cut its proposed build of 12 Type-45 Daring-class destroyers down to six. Moreover, when cash was allotted to navies it went to buying big multi-purpose amphibious ships like the Dutch Rotterdam. The absence of great power rivalry led to a preoccupation with deploying military forces to humanitarian crises and conflicts in the world's failed/ failing states (e.g., Somalia). For European navies the new emphasis was on operating in littoral areas, carrying and supporting troops ashore.

Stöhs is ambiguous on the value of such multi-purpose amphibious ships. They clearly have proven useful in providing necessary capabilities – think of the role of the ex-HMS *Ocean* (sold to Brazil in 2017) in supporting British forces ashore in Sierra Leone in 2000 – and in some cases

have operated as light carriers for fixed-wing aircraft (e.g., Spain's *Juan Carlos I*). However, he argues that the focus on expeditionary capabilities came at the long-term expense of investing in frigates and submarines capable of securing vital trade routes and sovereign waters. What surface combatants have remained in service have been pushed to take on a full spectrum of missions, from patrolling Exclusive Economic Zones (EEZs), to engaging in anti-piracy operations, and reassuring Baltic allies in the face of a resurgent Russia. In the author's view, this is a misallocation of resources for tasks better left to cheaper, smaller, less sophisticated classes of ships.

Fortunately, several European governments have come to the same conclusion and in recent years have turned to offshore patrol vessels to augment their fleets and free up surface combatants for more traditional operations (e.g., the UK *River*-class). Surprisingly, Stöhs is not clear on why offshore patrol vessels should not be considered as key naval assets despite admitting that they "have reached the size and in some cases the capabilities of ships classified

as frigates twenty-five years ago." Still, such investments have not made up for the decline in the number of aircraft carriers, surface combatants, submarines and aircraft between 1990 and 2014; a situation made worse with the onset of the 2008 global financial crisis, the effects of which were particularly acute in the euro zone.

In some cases, these reductions to naval capabilities were especially drastic. After over 90 years of service Denmark abandoned its submarine capabilities altogether in 2005 and in the same year Germany eliminated its land-based naval combat aircraft, the Tornado. Germany's remaining naval helicopters and maritime patrol aircraft have fared no better and are frequently grounded due to maintenance shortfalls and mechanical problems.

The Netherlands, which pound-for-pound had one of the most powerful armed forces in NATO by 1990, reduced its navy by 17 ships and came close to mothballing a brand new joint support ship, *Karel Doorman*, in 2013. Tellingly, *Karel Doorman* cannot carry Dutch tanks since



The Italian Navy FREMM frigate ITS **Carabiniere** provides assistance to fishermen off the Horn of Africa on 15 December 2015, during **Operation Atalanta**, the counter-piracy mission led by the European Union.



The three River-class offshore patrol vessels of the Royal Navy's Fishery Protection Squadron sail in formation off the Cornwall coast in February 2012.

the government sold the last of its 900 Leopard IIs to Finland in 2014. The Royal Navy, meanwhile, has probably undergone one of the steepest reductions of any European navy. Since 1990 its fleet size has been reduced by 60%, with its large surface combatants cut from 48 to 19. Arguably the most serious cuts came in the aftermath of the 2010 Strategic Defence and Security Review when the two remaining *Illustrious*-class carriers, all remaining fixedwing Harrier combat aircraft and the Nimrod MR4 maritime patrol aircraft project were scrapped. Removing the Nimrods quickly proved problematic when in 2014 the UK had to ask for allied help in detecting Russian submarine activity off the Scottish coast.

From a Canadian perspective, there is an element of irony here as Canada has at times been the beneficiary of European defence cuts. While controversial given implementation problems and the problems associated with their prolonged exposure to seawater while tied up, the UK's decision to get out of the conventional submarine business in 1992 provided Canada with the opportunity to purchase the four ex-*Upholder*-class submarines. This allowed Canada to maintain a capability the Royal Canadian Navy (RCN) was at risk of losing with the impending decommissioning of the *Oberon*-class in the late 1990s. The same applies to German and Dutch Leopard II tanks acquired during the Afghanistan war. Ottawa even briefly

considered buying *Karel Doorman*, a ship that bore many similarities to the sought-after capabilities in the original Canadian Joint Support Ship (JSS) project (circa 2004-2008), before the Dutch reversed their decision to mothball it.

But what is interesting in all this is the willingness of European governments to shield their defence industries even during periods of steep decline. One must only look at the prevalence of European naval designs on Canada's current procurement plans to see the global strength of this industrial base. For instance, the *Harry DeWolf*-class Arctic/Offshore Patrol Ship (AOPS) design borrows heavily from the Norwegian *Svalbard*; the new *Protecteur JSS* design is based on the German *Berlin*; and all three final entrants for the Canadian Surface Combatant (CSC) are European – the British Type-26, the Spanish F-105 and the Dutch *De Zeven Provincien* frigate.

European countries big and small – including Spain, Italy, Germany, Sweden, Denmark, the Netherlands, the UK and France – have taken the view that maintaining the sovereign ability to design, build and maintain ships is in their national interest. (A separate challenge, of course, is whether they are building enough.) Notably, even with few ships being built, European designs remain cutting edge. A key means of survival for these shipyards has been

collaborative builds. Two stand-out projects in this sense have been the Italian and French *Horizon* and FREMM frigates. Tellingly, France, which like the UK ceased using conventional submarines in the 1990s, still maintains a domestic capacity for building diesel-electric submarines. With Spain, France has developed the *Scorpène-class*, which has had overseas export success in Brazil, Chile, India and Malaysia.

Such collaborative projects have allowed these governments to share the high costs of building modern naval vessels while leveraging their respective shipyard infrastructure and maintaining advanced indigenous design and manufacturing capabilities. Whether the National Shipbuilding Strategy can break Canada's long history of boom-and-bust naval shipbuilding remains to be seen but examining options for cooperative defence procurement should not be discounted for future purchases (keeping in mind that operational requirements and regional job creation demands represent added barriers).

Finally, while there are gaps in his analysis Stöhs' book does illustrate the value of framing Canadian naval discussions in a larger context. A constant stream of stories on procurement woes and mechanical problems have painted a picture of a navy in perpetual disrepair.

However, when compared to many of its European allies, the RCN did relatively well in the aftermath of the Cold War. As defence scholar Rob Huebert has noted, Canada entered the new millennium with a "very modern and capable maritime force." Despite a decade of base closures, deep budgetary cuts and commitment-capability gaps, disproportionately shared by the army and air force, the RCN spent the 1990s acquiring a fleet of 12 new *Halifax*-class frigates, four modernized *Iroquois* destroyers, 12 maritime coastal defence vessels, and four slightly used but very advanced long-range patrol submarines. When the Danish navy, for example, was shedding capabilities, Canada was investing in a more modern multi-purpose fleet than its Cold War predecessor

Nor has Canada experienced quite the same degree of decline in the number of hulls as the Netherlands, for instance. In fact, under the defence policy outlined in *Strong, Secure, Engaged* in 2017 by the Justin Trudeau Liberal government, the RCN is set to achieve a one-for-one replacement of its major hulls. A dozen frigates and three retired destroyers will be swapped for 15 new Canadian Surface Combatants, and two retired auxiliary oil replenishment (AORs) ships will be replaced by two new Joint Support Ships. The possibility of Ottawa purchasing (as



The Royal Danish Navy's last submarine, HDMS Saelen, was decommissioned in 2004 and now sits in Copenhagen as a museum vessel.



HMCS **Ville de Québec** sails in the Mediterranean Sea on 20 August 2018, the first **Halifax**-class deployment with the new CH-148 Cyclone maritime helicopter. In terms of combat vessel numbers, the Royal Canadian Navy has weathered the post-Cold War period fairly well compared to some European powers.

opposed to leasing) the interim AOR, MV *Asterix*, in the near future sets the stage for the return of a three support ship fleet for the first time since HMCS *Provider* was paid off in 1998.

Likewise, the RCN's submarine service is now capable of simultaneous operations on both coasts for the first time since the 1960s. With reputed North Korean sanctions enforcement missions and a five-month deployment to the Mediterranean, both in 2018, these submarines have proven the value of long-endurance, undersea surveillance capabilities. A future modernization project will ensure the Victoria-class operates into the 2030s. With 28 Cyclone maritime helicopters and 14 modernized CP-140 Auroras, Canada's maritime air component will be equally positioned to complement the fleet. Although questions remain as to the future of the 12 coastal defence vessels, Canada has followed some of its European allies in acquiring offshore patrol vessels, the AOPS. As naval policy researcher Tim Choi has noted, the helicopter-equipped larger-than-typical patrol vessel represents a "well balanced design" that will address the country's lower-spectrum constabulary duties crucially needed in the Arctic.8

None of this is to say that Canada is somehow better at strategic thinking, procurement, or striking a balance on fleet capabilities than its European allies. Throughout its post-1945 history Canadian governments have frequently failed to align the navy with larger foreign policy objectives, whether economic or diplomatic. For example, several decades of attempts by Canada to improve trade relations with East Asia have been hampered by the lack of a consistent military commitment to a region of the world

where security and trade are considered to be closely linked. Similarly, acquiring new ships, submarines and aircraft has often occurred only once existing equipment is barely functional. However, as the tumultuous 2018 NATO and G7 summits have illustrated, uncertainty now clouds longstanding US alliances and economic relationships. With US foreign policy increasingly erratic and nativist under the Trump administration, Canada may find itself joining its European counterparts in reassessing whether more investment in naval capabilities is required so as to cement existing and new trading relationships.

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Dr. Jeffrey F. Collins is a Canadian Global Affairs Institute Fellow and a Research Fellow with the Centre for the Study of Security and Development, Dalhousie University. His latest book, Canada's Defence Procurement Woes, will be published by Palgrave Macmillan in 2019.

Making Waves

Arctic Naval Patrol and the Refuelling Thereof Commander RCN (Ret'd) R.A. (Bob) Rutherford

There seems to be something amiss with the specified range of the *Harry DeWolf*-class patrol ship. Either the range is underestimated or the fuel load is inadequate. Since there is no published figure for the fuel carried in the ship, it will be calculated in the following text from some reasonable assumptions to demonstrate the problem with which I am concerned. Furthermore, we are dealing with some very significant distances. The distance from Halifax to the refuelling station at Nanisivik on Baffin Island is 2,434 nautical miles (just slightly less than from Halifax to the UK). From there to the Alaska border is a further 1,474 nm and from the West Coast the run from Esquimalt to Nanisivik is 4,580 nautical miles, a 14-day voyage at 14 knots.

The *Harry DeWolf*-class patrol ship has a specified range of 6,800 nautical miles. A day's run at 14 knots amounts to 336 nm. At this rate the ship will reach the limit of its range in 20 days. A ship of that size (103 metres/6,440 tonnes) can be expected to consume about 25 tonnes of fuel per day at cruising speed. This means that the ship has 500 tonnes of useable fuel, which seems rather small – less than 8% of the ship's displacement. By comparison, a similar sized icebreaker in the Canadian Coast Guard fleet carries more than three times that amount of fuel. For example, according to coast guard specifications, CCGS *Henry Larsen* (99 metres/6,166 tonnes) has a range of 20,000 nm and a fuel load of 1,650 tonnes.

If the 6,800 nm figure for the *DeWolf* design is correct, then the need for the Nanisivik Naval Facility (NNF) is obvious to refuel the ships on Arctic patrol. Given that the duration of the Arctic shipping season is four months, and that the ship will have to return to the NNF every 20 days, this results in six loads of fuel in the course of the season. At 500 tonnes each time, this will deplete the NNF stock by 3,000 tonnes. When three *Harry DeWolf*-class ships are on Arctic patrol, the 7,500 tonnes of fuel in the NNF will be totally exhausted in a single season.

The Royal Canadian Navy (RCN) has only one supply ship, and *Asterix* is not an icebreaker, so the delivery of fuel to the NNF can reasonably be expected to occur only once per season, in the latter part of August when that part of the Arctic is reliably ice-free. Even when the Joint Support Ships enter service (and I won't speculate on when that will happen), this particular situation will not be improved, since we will still be limited to ice-free conditions and by the size of the NNF fuel tanks. Only with a supply

ship that is capable of navigating in ice can we get a load of fuel to the NNF early in the season as needed and again later on as the fuel supply is drawn down. Commercial ships could be used to resupply the NNF, but these ships will have many other commitments for Arctic resupply in the brief window available. The NNF fuel supply is unlikely to take precedence over supply to a populated Arctic community in need. One way or another, the need to resupply the NNF adds one more location to the already challenging task of resupply throughout the Arctic. The navy should look after itself and not add to the problem.



Minister of National Defence Harjit Sajjan raises the Canadian flag on the new flagpole at the Nanisivik Naval Facility during a visit in August 2018.

The conclusion to be drawn here is this. The NNF will soon enter service along with the first ship of the *Harry DeWolf*-class. For the next few years the NNF will be in no danger of running out of fuel, as long as it is topped up once per year. However, as more Arctic patrol ships enter service, and we do not have an ice-capable supply ship at our disposal, the likelihood of reaching the exhaustion



Few naval replenishment ship designs have ice capability, but New Zealand's future HMNZS **Aotearoa** is being built to Polar Class 6 standards to enable limited operations around Antarctica and could be a basis for a Canadian variant.

point of the NNF leaves the realm of possibility and becomes a certainty.

To meet the increasing fuel demand, we can either undertake the expansion of the NNF tank farm, or ensure that we have the right kind of vessel in our fleet to keep the existing tank farm supplied throughout the navigation season. My vote goes to the latter, because it adds greater capacity and flexibility not only to the Arctic naval fuel supply but to fleet replenishment in general. A suitably sized ice-capable tanker operated as a naval auxiliary vessel with civilian manning should adequately fill this need.

Understanding the Delusion and the Reality behind Canada's Arctic Offshore Patrol Ships Robert Smol

Some time in the autumn of 2018, provided that the latest construction schedule holds, a two-decade drought in Canadian naval construction will come to an end with the launch of HMCS *Harry DeWolf*, Canada's first Arctic Offshore Patrol Ship (AOPS). Over the next two to three years, assuming that there are no further delays, five other vessels will be at sea preparing for service in Canada's Arctic.

For those who may harbour concerns over Canada's ability to assert itself in the Arctic, the introduction of the AOPS into service might appear to be a good step. But will that step be in the direction Canada needs to go?

For the average taxpayer, being told that the Royal Canadian Navy (RCN) has taken on a dedicated capability to protect Canada's Arctic inevitably translates into some conception of armed war-fighting capability. However, the reality that the RCN has clearly stated, and that the politicians have absentmindedly accepted, is that the goal of the AOPS has little to nothing to do with providing an armed Canadian naval presence in the increasingly disputed waters surrounding Canada's Arctic territory. This is a reality to which the Canadian public has not as yet woken up.



The future HMCS **Harry DeWolf**'s hull floats on salt water for the first time on 15 September 2018 after its launch in the Bedford Basin in Halifax.



Unlike NATO and allied forces operating in the region, Canada is poised to launch a fleet of floating security guards. They will provide what amounts to a pacifist naval presence in a disputed area that we somehow still naively think the world will universally continue to respect as exclusively and undeniably Canadian. It is an area that, for better or for worse, is bound to increase in accessibility as well as in economic and strategic importance in the future.

To still have no Canadian dedicated naval presence in Canada's Arctic waters might not immediately detract from a possible capability that the navy might one day have – in other words, there was always the *possibility* that Canada would build some well-armed/capable naval ships for the Arctic. But with the formal introduction of the AOPS Canada has made that all-important political gesture to its allies and to the world about what it thinks the Arctic is worth, and how far it is ready to go to defend it.

On its website, the RCN states that the AOPS "will be capable of armed sea-borne surveillance of Canada's waters, including the Arctic." The RCN website also states that the armed capacity will come in the form of a single BAE MK38 25mm gun. This single weapon is designated to "support [the] domestic constabulary role."

Why is the RCN so careful in stressing that support role when listing the armed capabilities of the AOPS? Canada's Admirals are realists who are intimately aware of the tactical capabilities and limitations of the tools that the Canadian public and government permit them to use. Well before construction started on HMCS Harry DeWolf, the RCN had made it clear to Parliament that while the Canadian Armed Forces' area of operations in the Arctic remains "a fundamentally maritime operational environment," the AOPS will only fill a government support role and they must not be considered warships in the literal sense of the word.

This was most succinctly articulated in November 2014 by the then-Commander of the RCN, Vice-Admiral Mark Norman, before the National Defence Committee of the House of Commons. In his presentation, Admiral Norman stated pointblank to the Members of Parliament that "the AOPS are not being built or delivered to deal with the Russians. AOPS are being built to deal with the northern waters." Essentially this meant that they are to provide a security guard and safety patrol presence in and around Canada's disputed Arctic claims.

This pacifist strategic plan for the AOPS is also embedded,



The third and final member of the Danish Knud Rasmussen-class, HDMS Lauge Koch, fires a round from its 76mm gun.

ever so mildly, in the RCN's most recent strategic vision. The strategic plan extolls in detail the service's ongoing pride and willingness to follow and fight in areas well away from Canada's shores under NATO (meaning primarily US) areas of operation overseas. However the closer that seemingly bold vision to 'Help, Fight and Lead' drifts towards Canada's disputed Arctic territory, the primary area of operations for the AOPS, the more the vision becomes increasingly qualified, delegated and sheepish. Specifically, the 'Ready to Lead' pillar of the RCN's strategic plan pledges the RCN "as a trusted and capable partner of the Canadian Coast Guard; we collectively lead to ensure the safety, security, and defence of Canada's vast maritime estate."

Is this level of capability and commitment the norm to be found among Arctic states with significant maritime and territorial stakes in the region? By way of comparison let us restrict ourselves to Canada's league of reality and steer clear of the United States or the colossal Russian military build-up in the region and instead focus on Denmark.⁴ Denmark has comparable security challenges to Canada in its island territories of Greenland and the Faroe Islands. Like Canada, it is faced with the protection and surveillance of a vast Arctic territory far out of proportion with its southern metropolitan area size and population density.

But that is where the similarity ends. The Royal Danish Navy already has new, well-armed Arctic patrol vessels delivered, operational and currently patrolling Denmark's territorial waters around Greenland and the Faroe



The Danish frigate **Peter Willemoes** (left) sails next to HMCS **Winnipeg** during Exercise Jointex 15 on 24 October 2015. **Willemoes** is one of three in the **Ivor Huitfeldt**-class, and the design was one of the initial offerings for the Canadian Surface Combatant, but did not proceed to the final submission stage.

Islands. In 2004 the Danish government entered into contract with Karsten's Shipyard, Skagen, for the construction of three ice-capable Arctic patrol vessels. The keel for the first, *Knud Rasmussen*, was laid in late 2005 and the ship was launched in 2006 and commissioned in 2008. Two other vessels, HDMS *Ejnar Mikkelsen* and *Lauge Koch* followed in 2009 and 2013.

These Danish Arctic patrol ships are armed with MU90 anti-submarine warfare (ASW) torpedoes. Each torpedo carries a 32.7 kg charge warhead and has a range of 25 km. *Rasmussen*'s anti-air and anti-missile capability is provided by way of RIM-162 Evolved Sea Sparrow missiles. Additional defence is carried out by means of the Otobreda 76mm super rapid cannon system with a capability of 120 rounds per minute. The ship also carries two 12.7mm browning .50 calibre machine guns.⁵

At the time of writing, while HMCS *Harry DeWolf* awaits its official launch and work up, all three of the Royal Danish Navy's new Arctic patrol ships have been passing the spring and summer months of 2018 actively patrolling the waters around Greenland and Iceland. In August two of the three Danish ships were patrolling off the coast of Greenland. The most recent information available indicated that one is off the coast of Greenland, one is patrolling off the coast of Iceland, and the third was patrolling in the Arctic but has recently returned to its naval base in Denmark.⁶

Each of the *Knud Rasmussen*-class of ships was completed in Denmark (the hulls were constructed in Poland) at a total cost CAD \$70-80 million. Compare this to Canada's AOPS which are estimated to cost \$700 million per unit.⁷ And the military advantage over Canada does not just lie in this particular class of warship. Social democratic

Denmark, which provides its citizens with tuition-free and subsidized post-secondary education, generous pensions and benefits, and a full year of paid parental leave, has also mustered the resources and the resolve to modernize the rest of its operational naval fleet with three new air defence frigates, two armed support ships and six small patrol vessels – all constructed and completed from the early 2000s to 2014. These new warships are being added to the fleet's four 'old' frigates, which are the same age as Canada's most up-to-date *Halifax*-class frigates.

So regardless of whatever yeoman service Canada's seagoing security guards will no doubt perform in support of other government agencies, the fact remains that Canada's sovereignty battle cry projected by our dedicated Arctic naval ships, will be received as a pacifist proclamation. What political price will Canada have to pay when other states in the region assess, decide and proceed on the reality that the well-armed Arctic patrol vessels of the Royal Danish Navy may just have to assist the US Navy in providing armed naval escort and protection to Canada's AOPS in Canadian waters?

Are Canada's new Arctic Offshore Patrol Ships a step forward or capitulation of our commitment to protect our sovereignty? To think, as I'm sure many Canadians no doubt will, that we can sit, and be taken seriously, at the 'grown-up table' (aka NATO/US NORTHCOM) when we intentionally refused to wear our big-boy pants at sea is nothing short of hypocritical.

Notes

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 - The ships' recent locations and ports of call can be found at https://www. vesselfinder.com/vessels/HDMS-KNUD-RASMUSSEN-IMO-0-MMSI-220428000.
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Is It Time for a NATO Without the United States?

Pat Ambrose

Is it time to re-evaluate NATO? This doesn't mean eliminate it or disband it, but is it time to re-think it? Donald Trump has made the US relationship with NATO a key issue of his presidency and maybe in a twisted, upsidedown logic way, he has uncovered an interesting question. Is it time for NATO members other than the United States to take control and responsibility for their own welfare and defence? I'm not suggesting no US involvement; I'm suggesting NATO, as an organization of states without the United States, in an alliance with the United States. It would be a NATO working with the United States toward common purposes.

There are five good reasons for a new NATO-US relationship. First, Europe has evolved since 1949. The North Atlantic Treaty, signed on 4 April 1949, has three articles of particular interest in this discussion plus two informal objectives. Article 5 is the most famous, and important, of the articles. It states:

Article 5. The Parties agree that an armed attack against one or more of them in Europe or North America shall be considered an attack against them all and consequently they agree that, if such an armed attack occurs, each of them ... will assist the Party or Parties so attacked by taking forthwith, individually and in concert with the other Parties, such action as it deems necessary, including the use of armed force, to restore and maintain the security of the North Atlantic area.

This article – and the whole treaty – was originally focused on an attack by the Soviet Union, but it applies

equally well to Russia which in the modern era is beginning to re-emerge as a threat to Europe.

The other articles of interest are Article 3, which laid the foundation for multinational cooperation in military preparedness, and Article 2 which allowed for potential non-military cooperation. Two informal objectives, both related to Article 2, were to provide a foundation for collective security and to encourage democratization and political integration in Europe.¹

It is clear that four of these five objectives have been achieved. NATO militaries are well integrated. Notwithstanding its current issues, the European Union is well established, and provides economic and political cooperation throughout Europe.

This leaves Article 5 as the only article with continuing relevance. The need to maintain a counter to any potential Russian threat remains. Terrorism, a current concern of NATO, is primarily contained through national actions along with international intelligence cooperation within and among NATO states, the United Nations and other alliances. A NATO without direct US membership would still be a part of these bigger relationships.

Second, perception versus reality needs to be clarified. The US administration, plus apparently much of the Republican Party and 40% of Americans, believes that the United States is providing defence of Europe which European countries are supposed to be paying for themselves. This system, they believe, is unfair to the United States. In multiple tweets and speeches, Donald Trump has made this point. During the first debate of the presidential campaign, Trump said "28 countries of NATO, many of them aren't paying their fair share... - we're defending them, and they should at least be paying us what they're supposed to be paying by treaty and contract."2 In another example, Trump said "America is always fighting. We're the one that wants to go to World War III with Russia over Ukraine. So we're the ones always fighting. We're the ones putting up a lot of the money for NATO disproportionately – a lot." This perception that the United States is carrying the weight of NATO for a bunch of freeloaders would be an anomaly if it were only the unsettling opinions of one man, but it is the opinion of the President of the United States whose approval rating is near 40% and whose Republican Party currently controls the US Congress.

And it is not a new perspective. I have heard many times over many years from Americans in all walks of life how the United States is protecting the world. And there is the annoying habit of American newscasters and American politicians who refer to their President as the 'Leader of the Free World.' There were certainly Presidents who were given that honorary title for their commitment to freedom and democracy and their international leadership – and they deserved it – but it was always a title given to the person, not the position. It was an honour given to individual people by other states, it isn't an automatic title.

The United States sees itself as providing defence to NATO countries, but do the people of other NATO countries see themselves as vassal or tributary states? Vassal states are paid to serve with their masters militarily while tributary states pay for protection. Most Europeans and Canadians, I think, would see their countries as capable of standing on their own as allies. They would probably also believe that the idea of the United States as protector of Europe and Canada is a significantly flawed perspective. The people of NATO countries see themselves as friends and allies of the United States, not as burdens on Washington. As Donald Trump himself has said, "[w]e shouldn't have to buy our friends." Is it time to address these perceptions and clarify the facts?

The fact is that US forces in Europe are there as a part of NATO strategy, but they are also there as one component of purely US strategic objectives. As stated in the 2018 US National Defence Strategy, "the U.S. military will bias toward competing with China and Russia, most likely in the South China Sea, East China Sea, and Europe." The United States – now and in the past – would want to station troops in Europe whether it was a part of NATO or not. This isn't necessarily a good thing or a bad thing but who is doing what and for what reason should be made clear. Allies by definition have common goals in which their interests coincide. One country's aims on the international stage should not dictate the actions of its allies.

Third, NATO is strong. Although you would never know it

from the discussion in recent years, the NATO countries without the United States are quite capable of maintaining the goals of the original NATO Charter, particularly Article 5. As shown in Table 1, NATO countries without the United States appear to be well placed to deal with all but the most severe situations.

In conventional forces, NATO without the United States ranks either Number 1 or Number 2 in all categories except artillery (where it ranks Number 3) and in attack aircraft and helicopters. The attack aircraft figure doesn't provide a clear measure since many top-line fighter jets are quite capable of adopting the attack role. Clearly a unified NATO force would be a formidable foe even without US support.

The only area where NATO forces could be at a disadvantage would be in an all-out nuclear war. The 515 nuclear warheads possessed by Britain and France (combined) could counter most nuclear threats, but would be dwarfed in a conflict involving the more than 7,000 warheads that Russia and the United States have. It is logical, however, that in the case of nuclear war, both the United States and Russia would be involved somehow. The result of which need not be contemplated here.

Fourth, NATO without the United States would still possess significant international authority. The European Union is the second largest economy in the world in both general terms and in purchasing power parity (PPP) terms. (Of course, this will change somewhat after Brexit.) Five NATO countries − four EU countries (three plus Britain after Brexit) plus Canada − are in the top 10 economies in the world. Total NATO Gross Domestic Product (GDP) is only slightly lower than that of the United States.⁷ The euro (€), used by 19 of 28 NATO members, is the second largest reserve currency in the world as well as the second most traded currency after the US dollar.

Table 1. Comparison of Capabilities

	Manpower	Fighter Jets	Attack aircraft and helicopters	Tanks and fighting vehicles	Artillery and Rocket Projectors	Aircraft carriers	Warships, Frigates, Destroyers, Corvettes	Submarines	2017 Defence Budget (US \$)	Gross Domestic Product (GDP) (US \$)
NATO (without US)	2,000,000	1,583	675	68,750	7,400	9	192	80	\$273B	\$18.1T
Russia	1,013,628	818	1,110	47,700	14,252	1	100	62	\$47B	\$1.3T
China	2,183.000	1,125	681	16,716	10,300	1 (soon to be 2)	118	73	\$151B	\$11.2T
USA	1,282,000	1,962	3,800	44,700	2,950	20	75	66	\$647B	\$19.4T

Notes: (1) Data does not take into account modernity of equipment; (2) Many fighter aircraft can in fact fill both intercept and ground attack roles. Data only indicates dedicated ground attack aircraft.

Source: Compiled by the author using data gathered from www.globalfirepower.com.



Can NATO project its moral authority? Yes, it can and does. NATO has approximately 4,500 troops stationed in the Balkans as a deterrent to Russia. Great Britain, with the largest contingent, is supplying 22% of the deployed troops. British, German, Canadian, French and Spanish troops combined, represent 57% (2,690) of the NATO troops in the region while US troops number 900 (20%).⁸ While US forces are of course important, if it were necessary, other NATO countries have the resources to replace them.

NATO has a strong political position in the world. Two NATO countries (Britain and France) in addition to the United States sit on the UN Security Council as permanent members and two (Netherlands and Poland) currently sit as non-permanent members. NATO and the UN cooperate on such issues as crisis management, civil-military cooperation, human trafficking, mine removal, emergency planning, peace and security, arms control and terrorism.⁹

Finally, most NATO members have a Eurocentric world view. The views and strategic interests of other NATO countries often differ from those of the United States. American opinions of a German/Russian oil pipeline, refugees and the invasion of Iraq in 2003 are examples. It might, therefore, be helpful for Europe to pursue its own course in a revised NATO.¹⁰

This is a concern for Canada as a European defence group could leave Canada out in the cold. There would be a number of actions that Canada would have to take to avoid being isolated from a new European arrangement. Canada would need to develop relations, both in trade and politically, with more of the world. Therefore Canada could benefit from being the offshore (close friend) NATO member. It could help expand the benefits of Canada's free trade agreement with Europe. Militarily, Canada could play the same role with European allies as it did during WWII, the safe source for training, reinforcement and supply. Canada could also be positioned as the lynchpin between the United States and NATO with a finger in each pot. Canada would of course then be forced to do more for its own defence and become a real player in the defence games. In this new vision, Canadian defence would have three key criteria; protecting Canada; protecting North America; and protecting European sources of reserves, equipment and supply. For the navy this would mean more responsibility for trans-Atlantic supply lines. Interestingly, we have done that before.

Conclusions

Let's think the unthinkable – a NATO without the United States. Consider a modern NATO in which each country sees its participation as necessary, significant and equal. It would be an alliance in which each member plays an important role, and each is committed to a common defence. Consider if that commitment, the corresponding equipment purchases and force deployments were developed within a cooperative NATO-centred strategy. Consider a NATO response force fully funded, manned by a truly multinational force of like-minded states, equipped with its own modern equipment, rapidly deployable and effective in its own right. This NATO would be valuable to the world as a champion of democracy, civil rights and social justice as well as being a capable and ready ally of the United States or other states should the need arise.

Notes

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- 10. Astute readers might wonder about the example of the Western European Union (WEU), an earlier plan that was designed to ensure that Europeans protect Europe. If you haven't heard of the WEU that is because it never really went anywhere. So, what would be different? The failure of the WEU was at least partially due to American interests being counter to the idea on one hand, and EU countries assuming a huge American force would intervene should Europe be attacked on the other. If the United States was going to deal with an attack, there was no need for European countries to prepare for it. With the current American strategy, a rapid response by the United States, while it is still policy, is uncertain at least. In a NATO without the United States, the idea of a WEU takes on a much different context.

From Paris With Love: The Egyptian Navy and the Mistrals

Mohammed Elgayar

It has been two years since the delivery of two French *Mistral*-class amphibious assault ships to Egypt, and criticism surrounding the deal still lingers in the air. Discourse on democratic states funding and arming non-democratic states has been elevated to one of the key talking points of

international relations and foreign policy scholarship (although perhaps not in the White House). And while other countries, such as the United States, the United Kingdom and Canada, are also guilty of pursuing these deals, the French sale to Egypt has an interesting controversy surrounding it.

The *Mistral* ships were originally built for, and to be sold to, Russia. However, after the annexation of Crimea by Russia in 2014 this sale was terminated. With the sanctions and embargoes imposed on Russia, the ships remained orphaned until a visit by former French President François Hollande to Egypt. It was declared at the unveiling of the 'refurbished' Suez Canal on 7 August 2015 that an agreement to sell the ships to Egypt had been reached between the French President and Egyptian President Abdel Fattah Al-Sisi. In addition to the criticism surrounding France selling such sophisticated ships to Egypt, which was a cause for concern in itself, the greatest controversy arose from the Egyptian-Russian relations at the time.

The Controversy: Russia's New Foothold in the Middle East

Over the years Egypt has been a friend of the West, although not consistently, but recently it has represented a

dilemma for Washington. The birthplace of Pan-Arabism, a large country with a significant population, and arguably one of the more stable nation-states in the region, Egypt offers a foothold into Middle Eastern politics and could lead the way to a new era of change in the Arab world. However, many Egyptians still feel resentment towards Washington because of its long commitment to the regime of Hosni Mubarak.

Washington had to make a decision in 2011 as Mubarak was faced with massive protests. It had to make another decision two years later whether to embrace a military-led Egypt or implement embargoes and punishment after the elected President was removed by the military. President Barack Obama criticized the Egyptian military's removal of President Mohamed Morsi who came from the Muslim Brotherhood, and the military's subsequent crackdown on the Muslim Brotherhood. And Washington decided to stop the sale of weapons to Egypt. The continuing dilemma for Washington is that if it withdraws, others creep in to replace it. This gives Washington the choice of turning a blind eye to the abuses or losing Egypt to competing powers.²

The relationship between Moscow and Cairo is also an



The Mistral-class amphibious assault ship L1020 Anwar El-Sadat is seen here during her delivery to the Egyptian Navy on 16 September 2016.

issue for Washington. With Russia looking to cement a footprint in the Middle East and North Africa, Egypt was presented on a platter by Washington's decision in 2013 to halt the trade of weapons to an undemocratic Egypt. Perhaps recognizing that the policy was not helping US interests, the United States ended the ban on selling weapons to Egypt in March 2015. With other bigger issues in the Middle East – particularly the Islamic State and the conflict in Syria – and deteriorated relations with Russia, few people have paid much heed to the Egyptian situation. It should, however, be a concern.

The sale of the *Mistral* ships to Egypt came after the United States had lifted its ban on selling weapons, but too late to stop the development of relations between Egypt and Russia. In the years when the United States was not providing military assistance to Egypt, several agreements were made with Russia. Moscow would aid in building Egypt's nuclear power plant, offer weapons support where the United States withdrew, and locate Russian bases in Egypt.

This increased interaction and cooperation between Russia and Egypt led some to surmise that Egypt bought the ships to hold on to them for Russia. Others have speculated that Egypt bought the ships with Russian money and they will be at Moscow's disposal in the Middle East. (There are other rumours that the ships were paid for by Saudi Arabia in thanks for the Egyptian crackdown on the Muslim Brotherhood.) The Polish Minister of National Defence, Antoni Macierewicz, even claimed in 2016 that France resold the *Mistral* ships to Russia for €1.3 This rumor, for which the Polish minister could provide no evidence, was strongly denied by the French. While the Polish rumour seems unlikely, it is hard not to believe some of the speculation surrounding agreements between Moscow and Cairo on the future uses of the *Mistral* ships. And there may have been discrete dealings between Cairo and Moscow that provided incentive to Egypt to purchase the ships. This rationale stems, primarily, from Russia's increased cooperation with Egypt.

One of the main causes for concern has been the willingness of both France and Russia to cooperate with Egypt on training Egyptian officers to operate the ship. In February of 2018, Egyptian and French forces conducted joint naval exercises (Cleopatra 2018) in the Red Sea that involved the use of the *Mistral*-class ships.⁴ While working with France, Egypt is also utilizing Russian expertise on training its ships' crews.⁵ Increasing the speculation surrounding Russia's involvement even more was Russian

President Vladimir Putin's surprisingly calm reaction to the French decision not to sell the ships to Russia. The two countries reached what President Hollande referred to as a "mutually acceptable agreement" whereby Russia received \$1 billion in compensation for the unfulfilled deal. Putin then announced that a state-owned Russian company would equip Egypt's *Mistrals* with combat and control systems, radar and helicopter landing systems.⁶

There is evidence of further Russian involvement with Egypt's military in the sale of the Russian Ka-52 helicopters agreed upon by Putin and Al-Sisi. The Ka-52 Alligator, a newer two-seater variant of the Ka-50 Black Shark (and referred to as Black Sharks in *Egypt Independent*) will be stationed on the *Mistral* ships to carry out patrol missions, provide support fire, and transport heavy armaments to a ship.



A Ka-52 Alligator attack helicopter is pictured here in an undated photo from JSC Russian Helicopters, an umbrella company which oversees helicopter design and manufacturing.

The trade of arms between Egypt and Russia was definitely spurred on by the Obama administration's embargo, and therefore it is difficult to completely ignore the rumours of Russia benefiting from this sale. Trade was restored, and the Trump administration has embraced it, without Egypt satisfying the conditions set by the preceding administration. On 25 July 2018, US Secretary of State Mike Pompeo released the hold on US\$195 million of military assistance to Egypt.8 This is not the first time, the United States 'caved' on an agreement with Egypt, giving the latter the leverage, it needs to act without fear of repercussion.9 It's hard to know what Trump's intentions are surrounding Egypt, however, as the evidence stands it appears that the current President of the United States has established good rapport with his Egyptian counterpart.



A formation of French and Egyptian vessels sail during Exercise Cleopatra 2018 in the Red Sea in February 2018. From closest to viewer: French La Fayette-class frigate Surcouf, Egyptian FREMM-class frigate Tahya Misr, French Durance-class AOR and French Mistral-class Dixmude.

Concluding Remarks

France continues to be criticized for selling the ships to Egypt, and Western sanctions on Russia continue. It appears that the real winner of all this has been Egypt. Whether or not the ships were paid for by Moscow or bought for Russian use, the fact of the matter is that Egypt still has two *Mistral* ships – operated by trained (by the French and Russians) pilots and crew members – with Russian helicopters and advanced technology docked in its harbour.

The ENS *Gamal Abdel-Nasser* and ENS *Anwar El-Sadat* go a long way to propelling the capabilities of the Egyptian Navy ahead of its neighbours. From a strategic perspective, Egypt seems to be very capable of using tension between Washington and Moscow, and translating it to a military advantage in the region. Egypt has offered its allegiance to the highest bidder. And this action won't keep Cairo's leadership up at night.

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Whither the Type 26? Poseidon

This issue's Editorial discusses the competition to choose a design for the Canadian Surface Combatant (CSC) and whether the 'fix is in' to acquire the BAE Type 26, under construction in the UK and chosen by the Royal Australian Navy (RAN) to replace its ANZAC frigates.

The Type 26 frigate (also known as the Global Combat Ship) is a multi-mission warship designed to support anti-submarine warfare (ASW), air defence and general purpose operations. It is a modular and flexible design, which can be delivered as one of three variants: ASW, anti-air warfare (AAW), or general purpose. For years the discussion about CSC indicated that a number of them





A computer-generated image of the Canadian Type 26 variant.

would be air defence versions, with the remainder being general purpose (i.e., one-for-one replacements for the now scrapped *Iroquois*-class destroyers and the currently serving *Halifax*-class frigates). The Type 26 appears to be sufficiently versatile that a single version will be adequate for Canadian needs. Additional versatility to achieve the right capabilities for success in each mission would be provided by tailoring the missile load-out, air detachment (two Cyclones or one Cyclone and several unmanned aerial vehicles (UAVs)), mix of boats or other assets in the mission bay, and the composition of the ship's company. The core crew is 118 to operate the ship, with 157 being more typical but there is capacity for an additional 51 men and women for a total of 208. They could be boarding parties, a platoon of infantry, a medical team, or even just trainees.

The CSC is going to be around for 40-50 years – the last two DDH 280 destroyers were operational for 45 years, the steam destroyers, such as *Fraser*, for up to 38. This country makes the RCN wait a long time to procure ships, and takes *forever* to replace them!

It is incumbent on the RCN to get the best ships possible within the funding envelope, and I believe that is the Type 26. The fact that the Royal Navy (RN) and RAN are building a total of at least 17 of them, means that there will be many advantages to joining the club, just as we did with our Type 12 variants (the 20 *Cadillacs*) and similar vessels in many Commonwealth navies, and the *Oberon*-class submarines. The Brits design and build good ships – the media's thoughts on the *Upholder* submarine acquisition notwithstanding.

The Type 26 is leading edge in layout and automation, even if some of the characteristics vary between the navies, such as speed which will be based on different propulsion machinery, and national requirements, such as whether you wish to be able to join and keep up with an American carrier battle group. By the time of commissioning – the mid-2020s at best – a Canadian Type 26 would be probably 1½ generations newer in concept than the Dutch *De Zeven Provincien* design and a half generation or more newer than the Spanish *Cristobal Colon/* Australian *Hobart*-class.

The Type 26 looks right to my seaman's eye. It appears to be an excellent 'sea boat' too – something that is very important to a navy that operates in the north Atlantic and north Pacific. The RCN is not a fair weather navy!

It is postulated in the Editorial that Canada will not be able to take advantage of lessons-learned from constructing the Type 26, however the UK has started construction on the first three, ordered in July 2017, and the Australian government ordered its first three ships 30 June 2018. It would appear that timing will be such that there will be a chance to learn from experience gained in UK and Australian shipyards, and enable us to avoid errors that they might make. §

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A View from the West:

Assessing Maritime Threats from the Yemeni Civil War

Chris Chan

Cruise missiles struck and nearly sunk the United Arab Emirates (UAE) Navy transport catamaran HSV *Swift* near the coast of Yemen on 1 October 2016. Similar attacks have followed. It is clear that the civil war in Yemen has presented some of the most notable episodes of naval conflict seen in the 21st century. Surprisingly, however, the naval dimension of the civil war has received scant attention from the international media despite the intensity and scope of the attacks, and their proximity to globally significant sea lanes and chokepoints.

The Yemeni civil war, which is in its third year, is a conflict between the Iranian-backed Ansar Allah - more commonly known as the Houthis - and the internationallyrecognized Yemeni government. The civil conflict grew significantly when Saudi Arabia, together with a coalition of Arab state partners, intervened militarily on 26 March 2015 to prevent the Yemeni government from collapsing. External support for the Houthis has largely come from Iran, and the fight has grown into a proxy war as both countries have much to gain with an allied government in Yemen. A Houthi-controlled Yemen could give Tehran an ally on Saudi Arabia's southern flank, while a Saudiallied Yemen would mean that it doesn't have an Iranian ally on its southern flank! A main international concern is to stabilize the shipping lane in the Bab el Mandeb, the vital maritime chokepoint that is of significant strategic importance for global trade traveling via the Suez Canal, the Red Sea and the Indian Ocean.

The Saudi intervention in 2015 has included a naval blockade that is intended to disrupt Iranian efforts to supply

and equip the Houthi rebels. The blockade – as well as the threat of violence in the area – decreased shipping by an estimated 75% which has put significant strain on the Houthi cause (and the Yemeni population as a whole as it affects food/humanitarian shipments). In response, the Houthi leadership announced that it would push back against the blockade by targeting shipping in the hopes that such action would draw international attention. One Houthi leader told the media that they would "block the Red Sea and target international navigation" as a means of forcing the Saudis to reconsider their actions.¹

The Maritime Threat

The attack on Swift should have provided a clear warning for naval observers that Houthi missile capabilities were real and that the rebels were willing to use them against both commercial and naval vessels in the Red Sea. The Houthis had engaged in at least six separate missile attacks on vessels - including Swift - in the Red Sea from October 2016 to May 2018. The second attempt came a week after the Swift attack when the Houthis targeted the US Navy on 9 October 2016. Houthi missiles were reportedly fired at a USN convoy made up of destroyers USS Mason and USS Nitze, and the amphibious transport dock USS Ponce. In this case, unlike the Swift attack, none reached their marks. In retaliation, the United States launched limited cruise missile strikes on Houthi-controlled radar sites. This did not stop the missiles: the Houthis continued to showcase their capabilities in subsequent attacks on a UAE amphibious landing craft, the Saudi-flagged Abqaiq oil tanker, the Turkish bulk container ship Ince Inebolu,



The High Speed Vessel **Swift** arrives in Souda Bay, Greece, 25 March 2012. Operated by the US Military Sealift Command for most of its career, **Swift** was in the service of the United Arab Emirates when Houthi cruise missiles struck it on 1 October 2016.



A poster displayed at Joint Base Anacostia-Boling on 24 January 2018, shows several images of the Houthi remotely-operated small boat attack on the Royal Saudi Navy frigate **Al Madinah** on 30 January 2017.

and again in a separate encounter with USS *Mason*. These deliberate attacks on commercial shipping invite comparisons to the Tanker War that took place during the Iran-Iraq War in the 1980s, and this is perhaps a fair comparison as both were undertaken as a means of drawing in more foreign states to the conflict. An estimated 187 missiles fired by both the Iranians and the Iraqis struck merchant ships during the Tanker War and, although the Houthis are far from meeting this volume of attacks, the Yemen civil war represents the first instance since the 1980s in which missiles have been used this extensively in naval combat.²

The Houthis' regular use of Iranian-supplied anti-ship missiles has been accompanied by much more frequent deployment of small attack boats. While some of these cases involve individuals firing small arms from speedboats, other attacks have been considerably more sophisticated in that they involved the use of multiple remotely-controlled explosive craft. The Houthis reportedly deployed three of these so-called drone boats during an attack on a Royal Saudi Navy (RSN) *Al Madinah*-class frigate on 30 January 2017.³ The frigate succeeded in destroying two of the boats, but the remaining boat detonated on impact and killed two sailors. While the RSN has successfully intercepted subsequent Houthi drone boats, and their overall success rate appears to be low, the use of these boats is notable in that it foreshadows a future in which naval

combat is increasingly carried out with remotely-operated and autonomous vessels.

The use of cruise missiles and drone boats demonstrates the sophistication of the weapon systems of the Houthis and the quality of the support that they have received from their Iranian backers. However, these are arguably not the most dangerous weapons in the Houthi arsenal. The relatively low-tech naval mines deployed by the Houthis in areas around the coast of Yemen could prove



A rare in-action photo shows Fire Controlmen Petty Officers 2^{nd} Class Eric-Lee Howard and Timothy Murphy monitoring surface and air contacts from antiship missiles in the USS ${\bf Mason}$'s combat information centre on 10 October 2016 – presumably during the Houthi missile attack.



Images from a display at Joint Base Anacostia-Boling on 24 January 2018, show a Shark 33 autonomously-navigating fast boat captured in Yemen.

to be a much more dangerous threat to naval and commercial shipping. Reports suggest that the Houthis have deployed naval mines indiscriminately in the Red Sea shipping lanes, as well as in defensive positions to protect from amphibious operations. Both of these are dangerous for commercial vessels as the tethered mines, which are largely improvised designs, often break free. A UN report on the extent of this threat noted that the Saudi coalition's anti-mining operations had discovered 44 of these devices in the Red Sea in 2017, and some had drifted into the Gulf of Aden after having passed through the busy Bab el Mandeb strait.⁴

Taken together, the Houthi naval campaign represents a significant threat to global shipping in the vicinity of the 28 kilometre wide Bab el Mandeb. Past instances that represented similar threats to commercial shipping elicited forceful responses, including in 1984 when a multinational anti-mining operation was launched by the United States, Britain, France and Egypt to remove the naval mines placed in the Red Sea by the Iranian-backed 'Islamic Jihad' terrorist group. ⁵ As well, in the Tanker War the US Navy acted to protect shipping from both mines and missiles, and recent anti-piracy operations have involved navies from around the world deploying to protect shipping in the vicinity of the Horn of Africa. The Houthi anti-shipping campaign, despite aggressively employing the same weapons, has elicited a much less robust response.

So Where's the Spotlight?

It's possible that Western countries do not want to make a fuss about the Houthi actions because of concern about drawing negative publicity to the side that they're supporting. The ongoing naval blockade of Yemen and increasing reports of civilian casualties have prompted a public outcry against the Saudi coalition, and things only appear to be getting worse. Aid agencies estimate that 80% of the Yemeni population is in urgent need of food, water and medical aid.⁶ It is also likely true that, although the Houthis possess some high-end capabilities and are willing to use them, the threat they pose is manageable in the context of the Saudi coalition operations both in the Red Sea and as the coalition forces advance into Houthiheld territories on land.

This does not, however, detract from the significance of the naval combat that has occurred during the Yemeni civil war, which includes the use of anti-ship missiles, naval mines and remotely-operated vessels. These naval combat tactics have not been seen in decades and could serve as an example of how future naval combat may occur. Considering this, and the proximity of the conflict to several critical waterways, it is clear that the maritime elements of the Yemeni civil war deserve closer study.

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Chris Chan is a student at the University of Victoria and was a Research Assistant in the International Engagement Section at Maritime Forces Pacific in British Columbia.

Dollars and Sense:

Get Going with the Refresh of the National Shipbuilding Strategy

Dave Perry

This past August, the CBC's Murray Brewster reported that the federal government was considering a 'refresh' of the National Shipbuilding Strategy (NSS). It's about time.

The work that led to the National Shipbuilding Procurement Strategy began a decade ago, and it was officially announced in 2010. It is, was and remains an ambitious attempt to marry Canada's longstanding policy that federal ships must be built in Canada with the Canadian Coast Guard and Royal Canadian Navy's pressing needs for new vessels. The strategy has always had two components, one focused on industrial considerations (rebuilding the shipbuilding industry so the policy of building ships in Canada could be better supported) and one focused on procurement (replace the rapidly ageing federal fleets with new ships). A decade into this strategy, and eight years after its formal launch, it is well past time to reassess how it is working and make some needed changes to deliver the strategy's objectives.

Some progress has been made on the first focus. A fundamental revitalization of the shipbuilding sector has been achieved. The two shipyards selected as strategic sources of supply for large ships – Irving Shipbuilding and Vancouver Shipyards – were rebuilt from the ground up and extensively redesigned, respectively. Already direct employment and associated economic spinoffs have grown significantly. However, the procurement results so far are

less impressive. While construction is well underway, every project in the strategy is behind schedule, and those schedules continue to slip further into the future.

To some extent, this was predictable. Building newly designed ships in new shipyards for a government that got out of the shipbuilding business 20 years ago is not conducive to impeccable execution. But this has never been effectively communicated by the government of Canada so expectations have been mismanaged from the start. A refresh presents an opportunity, belated as it may be, to correct this.

It isn't clear though what is actually on the table. At one end of the spectrum, there is the view that no change, whatsoever, is needed, or should be made to the NSS. This is, to be blunt, absurd. No strategy, never mind one this complicated, could possibly have been conceived of, and then implemented, flawlessly over 10 years. At the other end of the spectrum, there seems to be a view that the NSS should be scrapped, or even that the 'Build in Canada' policy should be revisited. The first part of that is nonsensical. The strategy is multifaceted; some aspects are going better than others. Two ships have been launched – CCGS Sir John Franklin and the future HMCS Harry DeWolf – and selection of a winning bidder in the Canadian Surface Combatant competition is (hopefully) imminent. Blowing up the strategy would affect all of the progress to date.



The distinctive gantry crane 'Big Blue' at Seaspan Vancouver Shipyards towers over the second Offshore Fisheries Science Vessel under construction on 3 September 2018.



The many offices involved in the National Shipbuilding Strategy span beyond Parliament, and indeed Ottawa, resulting in inefficiencies and making coordination difficult.

Abandoning the Build in Canada policy would be even worse. Whatever the merits of examining the costs and benefits of that policy, the time to do so was a decade ago. At this point, walking away from that policy would reset the clock on these procurements. Achieving a presumed benefit would also require finding shipyards that were highly productive but free to take on major work for Canada, at the exact moment Canada is ready for that work to start. Fundamentally though, such an approach would presume that all the problems with the NSS to date are the fault of the shipyards alone and the government of Canada could not be managing the NSS any better. The shipyards certainly have room to improve (one of them, for example, just replaced its CEO) but the government *can* do better at managing shipbuilding.

It's difficult to get a full sense of how thing are working, or not, because the transparency around shipbuilding decisions and communications about the strategy have both dropped significantly. Improvements in these two areas would be a good start.

With the limited information available, there are nonetheless a few evident areas for improvement. All aspects of shipbuilding are intimately interrelated. The big projects have been awarded to two shipyards, and the projects currently in production (the Arctic Offshore Patrol Ships and Fisheries Science Vessel) need to be finished before the other projects can start. But they all still seem to be managed as discreet activities, instead of collectively. Because multiple organizations are involved, the management is dispersed in offices all over the National Capital Region. A better model would be to integrate and co-locate the management of the projects into one facility so decisions could be made together, with better visibility into their interdependencies. Similarly, the government's project management teams should be co-located with the shipyards which is still not fully the case. Managing projects from either side of the Rocky Mountains is not a recipe for success.

In addition, it is also no longer clear how Canada is using third party advice. Recognizing that in-house capacity was limited, the early days of the strategy featured

extensive use of third parties. At present, it is not clear that is still happening. The government secured the services of an independent shipbuilding advisor, Steve Brunton, but because of a perceived conflict of interest, his advice was not solicited on the most important aspects of the Canadian Surface Combatant project, which is by far the most consequential project for the entire strategy. Moreover, it is not evident how, or even if, the advice Brunton has provided is being used.



The offshore patrol vessel CCGS **Cygnus** seen in St. John's, Newfoundland, in 2017. Entering service in the late 1970s, **Cygnus** and its sister ships have yet to be formally scheduled for replacement in the National Shipbuilding Strategy.

Given all this, it would be wise to conduct a top-to-bottom assessment of the government's management of the NSS. One of the strategy's features from day one was having the shipyards agree to independent assessments of their productivity to ensure that they are internationally competitive. There was no comparable commitment to ensure the government's management is being done to a world-class standard. The refresh presents a perfect opportunity to rectify that – *if* there's a willingness to make change.

At the same time, as part of the refresh, it is worth reassessing whether NSS shipyard capacity as currently configured is appropriate for Canada's requirements for new ship construction (both large and small) and vessel maintenance and refit. The strategy announced eight years ago was broad, but did not cover a full-scale recapitalization of Canada's federal fleets. The Canadian Coast Guard, especially, has additional requirements for fleet renewal not announced in 2010. Examining how the NSS can best address all Canadian shipbuilding requirements at this point is logical, and entirely consistent with the original strategy.

The National Shipbuilding Strategy was the right thing to do. It's worth doing right.

Dave Perry is Vice President and Senior Analyst at the Canadian Global Affairs Institute.

Warship Developments:

Museum Ships

Doug Thomas

"Old soldiers never die, they just fade away." This saying, famously attributed to General Douglas MacArthur, actually comes from a song popular with British soldiers in WW I. It could also apply to old ships – particularly significant warships, some of which have been lovingly preserved throughout the world.

If you are interested in naval history and plan to travel to foreign countries, I suggest you investigate the Historic Naval Ships Association (HNSA) website and see if there are any HNSA ships in the areas that you are visiting. Some are part of a larger museum, such as the destroyer HMAS Vampire at the Australian National Maritime Museum in Sydney, and HMS Warrior which is part of the National Historic Fleet and one of the principal exhibits at the Portsmouth Historic Dockyard in England. Others are located in significant locations, such as the battleship USS *Texas* at the San Jacinto Battleground Historic Site. In Greece you will find a re-creation of an ancient trireme, in Japan the battleship *Mikasa*, the flagship of Admiral Togo at the battle of Tsushima in 1905, and in Sweden HMS Vasa, which sank on her maiden voyage in 1628 and has been raised from Stockholm harbour and restored during the past 57 years – one of the most ambitious preservation projects ever attempted.

It is interesting to note the many arrangements for the restoration and operation of historic ships - in fact they all seem to be different. The British WWII destroyer HMS Cavalier is a war memorial to the 142 Royal Navy destroyers and their 11,000 officers and men who were lost in WW II. Cavalier is a survivor of many unsuccessful schemes for her preservation since being paid-off in 1972, but she has found a happy secure home as one of three historic vessels at Chatham Historic Dockyard1 which also includes extensive shipbuilding and maintenance facilities and many period buildings, some still in use by the museum, a local university and other tenants. Cavalier has been the recipient of funding from the UK National Lottery, as have certain other historic vessels. Chatham Dockyard is a fully accredited museum and a major tourist destination. It is operated by a trust with a mandate to inform the public about the significance and role of the former Royal Dockyard at Chatham and its people in supporting the Royal Navy from sail to steam over a 400-year period.

A final note about *Cavalier* – during a visit by the author in August 2018, I was very impressed by the 15 volunteers

performing routine maintenance and preservation work that day to keep her looking 'ship-shape and tiddly.' All were retired sailors, and at least one of them was formerly a member of her ship's company when the ship was deployed to southeast Asian waters in the early 1960s.

Three retired Canadian naval vessels are among the many members of the world-wide HNSA. HMC Ships *Haida*, *Sackville* and the submarine *Ojibwa* are on display and available for tours.²

HMCS Haida

HMCS *Haida* is the last of 27 *Tribal*-class destroyers which served in the Royal Navy, Royal Canadian Navy and Royal Australian Navy. The British *Tribals* were heavily engaged in action with enemy forces, and only four of 16 units survived World War II. The first HMCS *Athabaskan*, *Haida*'s 'chummy ship,' was lost in a battle with German destroyers in the Bay of Biscay in April 1944.

During the Second World War, HMCS *Haida* joined the Arctic convoys, escorting merchant ships on the Murmansk run to the Soviet Union, and operated in the English Channel and Bay of Biscay as part of the lead-up to D-Day and the Allied invasion of Normandy. *Haida* subsequently served in the Korean War and the Cold War before being retired from active service in 1963, having participated in the sinking of 15 enemy vessels in WW II, including German destroyers and a U-boat, earning the nickname 'the fightingest ship' of the Royal Canadian Navy.

The year 2018 marks *Haida*'s 75th anniversary of being commissioned into the RCN. The last remaining Second



HMS Cavalier is seen here on 14 June 2012, moored in the Chatham Historic Dockyard.



The flag of the Council of the Haida Nation is raised on one of HMCS **Haida**'s halyards during its recommissioning ceremony on 26 May 2018 as the Royal Canadian Navy's flagship.

World War *Tribal*-class destroyer in the world, she was among the most powerful of her kind when built. *Haida* is operated by Parks Canada, and is berthed next to HMCS *Star*, the Naval Reserve Division in Hamilton, Ontario. This 75-year-old destroyer with World War II and Korean War battle honours became the Royal Canadian Navy's ceremonial flagship in a ceremony on 26 May 2018. Through this ceremonial designation, HMCS *Haida* flew the Canadian Naval Ensign and observed traditional sunrise and sunset ceremonies during its operating season from May to October. There was also a Honourary Commanding Officer appointed to the vessel.

HMCS Sackville

HMCS *Sackville* is 'The Last Corvette,' and is Canada's oldest warship and the sole remaining example of 269 *Flower*-class convoy escorts. She is undergoing muchneeded hull repairs funded by a \$3.5 million grant received from the federal government on 26 January 2018. The funds were given to the Canadian Naval Memorial Trust (CNMT), which owns and operates the ship as Canada's Naval Memorial, to complete extensive repairs to the hull structure of the 77-year old ship.

The repair work is being done at the Fleet Maintenance Facility (FMF) Cape Scott located within Her Majesty's Canadian Dockyard Halifax on the Syncrolift and inside the Captain Barney Johnson building. CNMT has been fortunate in receiving support from the Royal Canadian Navy since 1983 to help maintain and operate the ship. She is berthed in the dockyard during the winter and on

the Halifax waterfront next to the Maritime Museum of the Atlantic during the summer.

Under the grant contribution agreement, the Canadian Naval Memorial Trust and the Department of National Defence will also develop a long-term plan for the preservation of HMCS *Sackville*. "Canadians can take pride in this contribution to HMCS *Sackville*, ensuring it will continue to showcase the expertise and values that the women and men of Canadian Armed Forces perpetuate to this day," Harjit S. Sajjan, the Canadian Defence Minister commented in making the announcement.



HMCS **Sackville**, the last remaining **Flower**-class corvette, is seen here inside the RCN-owned Captain Barney Johnson maintenance and repair facility on 13 July 2018.

Conclusions

This is just a short list of the naval museums and the ships that have been preserved around the world. Many ships were lost to battle and to time, but with these museum vessels we can still get a sense of what a select few of the historic ships were like and an idea of what it was like to serve in them. For example, HMS *Warrior*, built in 1860, had perhaps the first clothes-washing and drying equipment in a warship!

Notes

- See The Historic Dockyard at Chatham, available at http://thedockyard. co.uk/.
- More information about the Historic Naval Ships Association (HNSA) is available online at www.hnsa.org.

Book Reviews

A Society of Gentlemen: Midshipmen at the U.S. Naval Academy 1845-1861, by Mark C. Hunter, Annapolis, Maryland: Naval Institute Press, 2010, 264 pages, US \$34.95 (soft cover), ISBN 978-1-59114-397-0

Reviewed by Colonel (Ret'd) P.J. Williams

While the US Civil War has received much coverage by historians, the period covering the decades immediately before that conflagration has been a path less well trodden. Mark C. Hunter, a maritime and naval historian, has decided to break new ground in this fertile area with a social history of the education of US naval officers at Annapolis, Maryland, in the pre-civil war period. (Note that I said 'Annapolis' and not the United States Naval Academy (USNA), which though located there, was not formally founded until 1850, and was preceded by what was known as the Naval School, and indeed a proliferation of other such schools in locations such as Boston, Philadelphia and Norfolk.)

The author sets out his aim very early in the work, stating that "[t]his study asserts that the U.S. Navy, through the U.S. Naval Academy, exhibited some of the characteristics of a profession in the antebellum era and sowed the seeds for later developments after the Civil War" (p. x).

In broad terms the book covers naval officer education in both the school and the academy eras. Taking a chronological approach, Hunter first describes naval education in the pre-school period, and how this evolved and became increasingly professionalized in the late 1840s, an evolution in part due, in the author's view, to the performance of the US Army during the Mexican-American War (1846-1848). Subsequent chapters describe the background of naval officer candidates, how discipline was imposed and evolved during this period, and how the introduction of summer cruises and the presence of vessels tied up alongside the academy grounds further contributed to the professionalization of the USN's officer corps.

The USN was originally envisaged as a temporary force, authorized by Congress to combat the threat from Barbary pirates in the late 18th century. As a result, officer training was somewhat ad hoc with promotion, for example, being seen as a right by seniority. Many partisan debates subsequently ensued as to the merits or otherwise of professionalizing naval officer education, but it was not until 1850 that the USNA, as we now know it, was established under the Bureau of Ordnance and Hydrography. A year later a four-year program was in place at Annapolis for entrants who has just finished their civilian schooling. New cadets were expected to be between the ages of 13-15! A formal system of student assessment was put in place as well as a curriculum which included two hours per week on 'moral science,'

which taught the cadets decision-making skills and that "while they might disagree with the state's orders, professionals had to obey their client" (p. 54). This dictum was sorely tested with the approach of the Civil War, with many Southerners resigning from the academy.

While the use of statistics might sometimes result in dry history, I did not find this to be the case here. Such statistics are supplemented by anecdotes of several officers who attended the Naval School and the USNA during this period – such as Admiral George E. Dewey of Spanish-American War fame and the noted naval writer Alfred Thayer Mahan.

The book is supplemented by two detailed appendices, which cover statistics on disciplinary records and assessments of cadets during the 1860 summer cruises. For the latter, ratings ran from Poor, Indifferent, Tolerable, Fair, Good, Very Good and Excellent. The Notes run to some 27+ pages and the Bibliography another six, two of which consist of primary sources. In the Acknowledgement section, Hunter gives credit to Professor Lewis R. 'Skip' Fisher of Memorial University of Newfoundland and to Dr. Roger Sarty of Wilfrid Laurier University.

A series of tragic and fatal collisions involving USN warships with civilian vessels during 2017 prompted a wideranging review of the US Navy's policies regarding, *inter alia*, training and certification. Doubtless, the subject of officer training will come under great scrutiny. As those responsible seek to learn lessons from these events and to implement policies and procedures designed to prevent recurrence, they would do well to pause and reflect on the USN's history and how past generations addressed the questions of ensuring a professional officer corps, as this book has so ably described. Recommended.

When China Ruled the Waves: The Treasure Fleet of the Dragon Throne, 1405-1433, by Louise E. Levathes, New York: Oxford University Press, 1996, 252 pages, AUD \$34.99 (paperback), ISBN 978-0-19511-207-8

Reviewed by Colonel (Ret'd) Brian K. Wentzell

Following a writing career for various publications including *National Geographic*, *The New York Times* and *The Washington Post*, Louise Levathes was a visiting scholar at The John Hopkins Center for Chinese and American Studies at Nanjing University in Jiangsu, China. This life experience gives Levathes good qualifications for *When China Ruled the Waves*. Despite its age, this book remains relevant because it offers important

historical background for the current efforts of China to re-establish the Maritime Silk Road, which like its predecessor, stretches from mainland China through the South China Sea, the Straits of Malacca and the Indian Ocean to the Strait of Hormuz and East Africa.

The author records the history of the creation and demise of the Maritime Silk Road from 1405 through 1433, some 600 years before the recent Chinese announcement of its restoration. The establishment of the original Maritime Silk Road resulted from the desire of the Dragon Throne to develop trade with the new world to the west, thereby expanding the influence of China. Despite the political commitment and the allocation of human and financial resources, the whole effort lasted a mere 28 years. Changes in leadership, economic and political fortunes led to abandonment of this national enterprise.

Questions arise from comparing past events to present events. Will China's 21st century Maritime Silk Road suffer a similar fate? Will pressures from within China curtail it? Will external actors be successful in minimizing the early success of the current Chinese political leadership? These are important questions that cannot be answered today but will preoccupy business leaders, politicians, military officials and citizens of many countries bordering the Pacific and Indian Oceans and beyond.

This book is recommended as it reveals an important part of Chinese history and its impact upon current events.

East Asian Strategic Review 2015, The National Institute for Defense Studies Japan, Tokyo: The Japan Times, 2015, ISBN 978-4-78901-603-2

East Asian Strategic Review 2016, The National Institute for Defense Studies Japan, Tokyo: The Japan Times, 2016, ISBN 978-4-78901-642-1

Reviewed by Colonel (Ret'd) Brian K. Wentzell

The purpose of these fascinating reviews is succinctly stated in the Preface to the 2015 edition, "[s]ecurity risks are on the rise in East Asia, making it all the more important to cultivate an objective, comprehensive understanding of the contents and realities of rapidly changing international affairs through rigorous but detached discussion founded on sound logic and accurate information" (p. iii). The 2015 edition analyses the significant security developments of 2014 in the region of East Asia.

The 2016 edition analysis of developments in 2015 includes a discussion of the impact of Islamic extremism and explores the issue of space security from an Asian

perspective. In each review the work was undertaken by Japanese researchers. For North American and other foreign audiences, it is instructive to learn of their assessments, from their perspectives, about events unfolding in East Asia. Particular attention is given to events in the Koreas and China, and their impact on Japan and the United States.

One of the most important discussions in the 2016 edition concerns the revision of the Japanese Constitution that dates from the United States-Japan Security Treaty of 1950. By that treaty and the Constitution of Japan that was thereafter adopted, the inherent right of self-defence that every country has under international law was limited to "the minimum extent necessary to protect the nation in dealing with imminent unlawful aggression against Japan" (2016, p. 298). The Japanese Cabinet on 1 July 2014 concluded that the country had the right to take active defensive measures, to the minimum extent necessary, not only if Japan came under direct attack but also if a closely aligned country should be attacked and such event threatened Japan's survival and posed a clear danger to its "people's right to life, liberty, and pursuit of happiness" (2016, p. 299).

This interpretation appears designed to justify the provision of assistance to the United States or another friendly state in the Pacific Ocean area if that state were attacked. However, unless Japanese citizens are directly imperiled, Japan's ability to mount a military response appears to be restricted. Furthermore, the absence of a multinational entity like the North Atlantic Treaty Organization (NATO) restricts the ability of states in East Asia to execute a policy of collective defence. Bilateral arrangements may not be a sufficient alternative in the face of aggression by a state that involves actions against multiple countries. This is a deficiency that political leaders should consider as a matter of urgency.

In conclusion, these two editions are valuable texts that provide important detail about the countries of East Asia and the security challenges they face. They are highly recommended.

The Future of Sea Power. Proceedings of the RAN Seapower Conference 2015, edited by Andrew Robert Forbes, Australia: Sea Power Centre/Department of Defence, 2017, 140 pages, ISBN 978-0-99200-048-1

Reviewed by Hugh Segal

The proceedings of the RAN Seapower Conference in 2015 were published in 2017 by Australia's Sea Power Centre,

and edited by Andrew Forbes. The book is a multidimensional and deeply informative collection of insightful, granular and conceptual papers on modern naval challenges that embrace the full gamut of strategy, logistics, technology, joint forces doctrine and nuance, and the hardscrabble work of competitive naval deployments for defence, territorial control and deterrence. The conference assembled a superb mix of experts in geopolitics, naval sea systems, force generation, submarine design and technology, defence science and technology, from Australia, the United States and Canada, as well as service chiefs from Australia and Sri Lanka, and naval education leaders from the United States and Australia.

The mix of insight, analytical reach, technical and logistics nuance and genuine capacity analysis, for the present and future is both daunting and deeply impressive.

The most detailed and 'realpolitik' geostrategic analysis of Australia's Pacific neighbours and risks is offered with remarkable frankness and clarity by Dr. James Boutilier, long-time Canadian special advisor of international engagement at Maritime Forces Pacific Headquarters, Esquimalt, British Columbia. His capacity, over many years, to offer a ruthless no nonsense-no false optimism view of what China is up to remains as strong, clear minded and balanced as ever. His presence was a worthy Royal Canadian Navy contribution to the deliberations of the Royal Australian Navy (RAN).

A mix of Australian service heads – army, navy and air force – spoke bluntly about what total force and joint force collaboration and joint execution means, and how vital it is to sustaining Australia's capacity to maintain its own sharp end, and have genuine deployability at all times and in every circumstance.

That the RAN is in a robust build and commissioning phase, turbo-charged the presentations with a real world 'Australia is stepping up' sensibility. The arrival of new *Canberra*-class multipurpose ships and *Hobart*-class surface platforms speaks eloquently of the robust modernization and future focus of the RAN, and the support it has received from the Australian government and people. (As an aside, HMAS *Canberra* has, according to the book, "moved more personnel and equipment in the last eight weeks than her predecessors did in the last five years.")

A broad range of naval challenges and opportunities are discussed in the 10 papers included in the book. The papers span the full range of issues from signature management, submarine design, new mining and anti-mining technologies, propulsion developments, laser and direct energy weapons, the macro-advantage of information technology properly conceived, networked and managed, the

cyberspace battlefront, amphibious warfare, all framed by the unique challenges of Australia's specific geographic location and economic relations with Asia in general and China in particular. Maritime crime and terrorist challenges at sea are not left out. Nor are the challenges faced by neighbouring Philippine or Sri Lankan Navies.

Above all, these proceedings cover the broad framework of the challenges – from the mechanical, technological and design to the geopolitical, strategic and philosophical – any modern navy serving a democratic modern country dependent upon the sea must address. An eloquent frame for the entire discussion was proposed by Admiral Tim Barrett at the outset. He noted that "[w]e must never forget that sea power is not about more power. Sea power is not about brute force. Sea power is about service at sea as a force for good."

Regional security, lethal capabilities properly managed, controlled and networked, is how a state projects its values and preserve the freedom of the seas for commerce and lawful passage. Values, training, courage and the will to engage may well be significantly enhanced by technology of various kinds. But the message from these RAN Sea Power proceedings is that they can never be replaced.

The Future of Sea Power is a superb, informative and deeply inspiring read, especially for those who see the navy as a central part of any modern democracy's consistent engagement with the realities of a complex, ever-changing, sometimes hostile and sometimes cooperative global community.

Navy Strategic Culture: Why the Navy Thinks Differently, by Roger W. Barnett, Annapolis, Maryland: Naval Institute, 2009, 224 pages, figures, maps, Appendix, Notes, Bibliography, Index, US \$28.95 (cloth), ISBN 978-1-59114-024-5

Reviewed by Ken Hansen

Captain Barnett's book is a whirlwind tour through American naval history in only 130 pages; another 70 pages contains selected quotations, and then there are notes, a bibliography and an index. He has tried to connect the practices of sailors and marines with the strategic level of naval decision-making. This is a difficult subject, largely because so little is written on the basic nature of the maritime world and how the practices of current seafarers are connected with the past. Barnett argues convincingly, for the most part, that the US Navy (USN) and US Marine Corps (USMC) have a different approach to a wide variety of issues and that these constitute both a belief system and

a conceptual framework. The accolades it has earned him from many respected and influential reviewers, including Canadian Colin Gray and American Norman Friedman, are fulsome and laudatory. Therefore, with great trepidation, I set out my observations for consideration.

There are passages in this work that rightly belong in the category of absolute genius by translating events into doctrine. Because he posits a unique naval strategic culture, Barnett starts with a review of high-level command issues and the different ways that each of the American armed services has approached warfare and conducted operations. Beginning with American naval operations against the Barbary pirates and ending in the post-Cold War era, Barnett identifies the key attributes of naval operations, distills out their conceptual nature, and connects them to what he views as the essential nature of naval operations: they are expeditionary.

Barnett ignores the defensive chapters of American naval history, dismissing them as the actions of a 'gunboat navy.' He suggests that the more focused on local defence the navy became, the more its fortunes waned. His argument is that, from the very beginning, "the United States had an enduring stake in global affairs" (p. 59). It was not until the writings of Admiral Alfred Thayer Mahan a century later that this realization was brought to the forefront of American strategic thinking through Mahan's landmark book, *The Influence of Sea Power upon History*. Barnett sets out his thesis which is that "[t]he keys to being expeditionary are to be forward, mobile, offensive, self-reliant and adaptable" (p. 59).

Perhaps because of the US Coast Guard, which rates little mention, Barnett is free to dismiss defensive operations from his argument. He views local security as law enforcement, rather than national defence, and argues that the need to make the national populace safe from poorly defined threats required the navy to commit "to a widespread, comprehensive defence in depth." This misuse of naval force, as he sees it, resulting primarily from the attacks of 11 September 2001, gave rise to the Department of Homeland Security and "a change in focus and emphasis in providing for the security of the American people" (p. 103).

Barnett's key conclusion about the rise of contemporary asymmetric threats provides the most forceful moment in the book. He states, "[t]he so-called Global War on Terror has in many ways conflated the two [law enforcement and war fighting], to the consternation and confusion of just about everyone in the world" (p. 103). This thesis alone could have been the central argument of the entire text but it is abandoned to pursue another far less convincing line of argument.

After making several references to the flexibility of thought required of any organization that has a global outlook, Barnett uses the last chapter and a half to set out his opinion that there is no place for either women or homosexuals (and one must assume the entire LGBTQ community) inside the navy. Pages 117 to 130 are an unbridled rant against the disruptive effect of anyone other than heterosexual males in what he calls (quoting Alastair Finlan) "an environment that celebrates hypersexuality [that] inevitably creates bonding at the sexual level" (p. 117). He warns that "the potential for catastrophic failure in future combat will have been increased" unless this corrupting influence on the cohesion of the 'Band of Brothers' is expunged from the navy and marine corps (p. 117). He warns darkly of the consequences, stating "[t]he risks and stakes for the United States of defeat in armed combat are the highest imaginable" (p. 121). He does this without a shred of evidence to substantiate his bombastic claims.

I have served in USN ships and counted amongst my closest friends a number of officers who were gay. I can attest to their loyalty and patriotism and know that they held the same dedication to service in their navy as we did in ours. There was absolutely no confusion about our roles, missions or duties. The end of this otherwise interesting and challenging book is an affront to the memory of friends that I still hold as the finest examples of professionalism and integrity. I have not served at sea with women, but have no reason to believe than anything Captain Barnett asserts about them is factual.

A book about naval culture is rare. A credible author with extensive professional and academic experience, Barnett has wasted what could have been a strong effort to set down the type of foundational work that Admiral Mahan did in 1890. Instead, his dogmatic defence of a social attitude from a bygone era serves as a warning to strategic thinkers everywhere about the false social conservatism of naval officers. This is a great loss.

The last comment should be to open-minded thinkers who can see past the bombast of this book and recognize the moments of genius Barnett delivers when he translates history into doctrinal concepts. However, this is a book about the US Navy. Drawing the same conclusions from the history of the Canadian or any other navy based on the process the author used would be recklessly dangerous. History is relevant to the participants and the circumstances and is not necessarily transferable to other times and different settings. Let the reader beware of sweeping generalizations, of which there are many in this book, lest anyone think that the culture of the sea is identical in every ocean.



HMCS Ottawa fires its 57mm Bofors gun while on deployment in the Arabian Gulf, 7 November, 2006.

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After 55 years, 2018 marks the final year of the CH-124 Sea King in Royal Canadian Air Force service. Commemorating this, two aircraft slated for museums after retirement were repainted in a retro scheme harkening back to the early years of their service. This Sea King was transiting towards 443 Squadron in Patricia Bay, BC, when it was called upon to support *Operation Lentus* fighting forest fires in British Columbia.