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Figurative Camo by Jessica Lynn Wiebe

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# How GBA+ Can Advance and Transform Foresight Analysis <sup>i</sup>

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## About the Authors



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Andrea's research focusses on the intersection of national defence, politics, and society, examining the military as an institution, civil-military relations, personnel policy, and procurement. Her current project investigates the narratives of the Elsie Initiative and their effects of female combat soldiers. A frequent media commenter, Andrea's work has been published in *International Journal*, *Canadian Foreign Policy Journal*, *the Canadian Naval Review*, as chapters in several books, and in popular venues such as *Policy Options*. She is the co-editor, with Brian Bow, of *Canadian Foreign Policy: Reflections on a Field in Transition*, published by UBC Press (2020).

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Leigh Spanner is a Postdoctoral Fellow at the Centre for Social Innovation and Community Engagement in Military Affairs at Mount Saint Vincent University. Here, she is undertaking research funded by a SSHRC Insight Development Grant, which explores the gendered dynamics of the transition from military to civilian life in Canada. Her work examines gender norms and power relations in state militaries and Canadian defence and security policy, with a particular focus on how intimate lives and households are integrated into and informed by national security objectives. Leigh received her PhD in Political Science at the University of Alberta in 2019, where her research on military families was supported by a SSHRC Doctoral Fellowship, a President's Doctoral Prize of Distinction from the University of Alberta and a Queen Elizabeth II Graduate Scholarship. Her research has been published in *International Journal: Canada's Journal of Global Policy Analysis* and in the journal of *Critical Military Studies*.



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## **ABSTRACT**

This working paper argues that a Gender-Based Analysis “Plus” (GBA+) lens that draws on intersectional feminist scholarship can advance the method and practice of foresight. We show how GBA+ can help foresight analysts 1) recognize the relevance of sex, gender, and intersectionality to forecasting; 2) diversify the expertise and knowledge they rely on; and 3) consider a wide range of security actors and issues that might otherwise be missed. We then provide a GBA+-informed foresight analysis of information warfare, cybersecurity, and military personnel challenges for the Canadian Armed Forces (CAF). We conclude that a consistent and thorough integration of a GBA+ lens, one that draws on intersectional feminist research, can significantly improve the robustness of foresight as a tool of analysis and decision making in Canadian defence policy. Moreover, GBA+-informed foresight can help challenge the status quo and envision an alternative feminist-informed defence policy for Canada.

## **KEYWORDS:**

Gender Based Analysis "Plus", GBA+, gender, foresight, defence policy, Canada, security, feminist, intersectional

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The DSFG GBA+ team which has authored this working paper was explicitly set up to help better integrate GBA+ into Canadian defence and foresight analysis. This Working Paper draws on, and reproduces, some material previously included in our team’s GBA+ applications and GBA+ toolkit. We thank the anonymous peer reviewer who provided helpful comments on an earlier version of this Working Paper.

## INTRODUCTION

Strategic foresight analysis is defined as the “structured and explicit exploration of multiple futures in order to inform decision-making” (OECD 2019, 3). Governments, international organizations, non-governmental organizations, and corporations use foresight analysis to identify and plan for future challenges. Foresight analysis is employed across a wide range of focus areas, from economics, technology, and defence to food security, city planning, and development. For example, international organizations such as the United Nations Development Programme (UNDP) or the Organisation for Economic Cooperation and Development (OECD) use foresight to plan the implementation of sustainable development goals in a context of multiple global uncertainties (OECD 2019; UNDP 2018). Similarly, military alliances such as the North Atlantic Treaty Organization (NATO) and national security agencies such as the US National Intelligence Council regularly produce foresight analyses to anticipate and prepare for future defence challenges (NATO 2017; National Intelligence Council 2012).

While past foresight analysis on defence was largely blind to sex and gender, contemporary analysis has begun to consider them. As a result of broader gender mainstreaming efforts and feminist advocacy, organizations such as the UN, the OECD, NATO, as well as national governments are increasingly paying attention to sex and gender in their foresight analyses. While attention to sex and gender in foresight is growing, the incorporation into foresight analysis of sex and gender is uneven, inconsistent, and mostly superficial. What we see in much foresight analysis is that sex is being included as a variable, for example in consideration of sociodemographic trends, or that gender inequality is considered as one societal trend among others. Rarely do we see the application of gender as an *analytical* category or the mainstreaming of a sex and gender lens throughout foresight analysis. This is a missed opportunity. The bulk of foresight being done today in the fields of defence, in Canada and internationally, may be empirically less accurate and nuanced due to its lack of consistent and thorough attention to sex and gender.

The mainstreaming of a sex and gender lens throughout research and policy was spurred by the 1995 Beijing UN World Conference on Women. Referred to as gender mainstreaming, this process involves “assessing the implication for women and men of any planned action, including legislation, policies or programmes, in any area and at all levels” (UN ECOSOC 1997, 3). Gender mainstreaming helps institutions and organizations to identify and correct discriminatory policies and practices. The Canadian government adopted sex and gender mainstreaming by developing Gender-based Analysis (GBA) in 1995. In 2011, GBA was amended to Gender-based Analysis Plus (GBA+) to better account for the ways in which sex and gender intersect with other identity factors. The “plus” in GBA+ signals a commitment to intersectionality; that is, the “plus” recognizes that sex and gender intersect with multiple identity factors such as race, ethnicity, religion, age, and mental or physical disability in ways that produce layers of advantage and disadvantage (Government of Canada 2018b). GBA+ is “a tool to assess how diverse groups of women, men, and non-binary people may experience policies, programs and initiatives” (Government of Canada 2018b). In early 2016, the Chief of the Defence Staff passed a directive committing the military to apply a gender perspective and gender-based analysis “plus” (GBA+) to all CAF planning and operations (Chief of the Defence Staff 2016).

We argue in this working paper that the application of GBA+, especially if it draws on intersectional feminist research, can significantly enhance the method and practice of foresight. An intersectional feminist lens highlights some of the shortcomings of foresight analysis. To make this argument, we show how a GBA+ lens can help foresight analysts 1) recognize the relevance of sex, gender, and intersectionality to forecasting; 2) diversify the expertise and knowledge they rely on; and 3) consider a wide range of security actors and issues that might otherwise be missed. Together, these methodological moves can enhance the quality of foresight analysis by helping analysts challenge common assumptions and be more attuned to “weak signals,” the “less advanced, noisy or socially situated indicators of change in trends and systems” (UNDP 2018, 27).<sup>ii</sup> We then provide a GBA+-informed foresight analysis of information warfare, cybersecurity, and personnel challenges facing the Canadian Armed Forces (CAF). We argue that foresight can become a more powerful tool of security and defence analysis if a GBA+ lens is thoroughly integrated. Importantly, GBA+ needs to be more than an “add on” to defence policy and foresight analysis. Applying GBA+ throughout the process of foresight analysis, and drawing on its intersectional feminist roots, can significantly improve the robustness of foresight as a tool of analysis and decision making in defence policy. GBA+-informed foresight can also help challenge the status quo, and with it, the reproduction of existing gender and intersectional inequalities. Moreover, and more ambitiously, foresight can be used as a tool to envision an alternative feminist-informed defence policy for Canada.

## **FORESIGHT THROUGH AN INTERSECTIONAL FEMINIST LENS**

Foresight analysts have for the most part ignored feminist scholarship. But, in fact, foresight analysis is very compatible with feminist analysis. Foresight is about making what is not yet visible *visible*, thinking outside the box, and challenging our assumptions about what is and is likely possible in the future (Eichler 2020). A “gendered lens” is indispensable to uncover the unexpected and not yet obvious (“wild cards” and “weak signals”) – a key goal of foresight analysis. A “gendered lens” can enable us to see what is often left invisible because it is considered marginal to the “real” world of politics: women’s expertise, work, and agency, as well as feminized issue areas (Basu and Eichler 2017; Enloe 2017; Runyan 2019). Gender norms of masculinity and femininity help make certain aspects of global politics appear important and *normal*, and thus help legitimize the status quo. Issue areas become feminized because they are associated with women or the private sphere; because they are seen as less important than “high” politics. Defence is a key example of an issue area that is highly masculinized and in which feminized issues and actors are often marginalized to the point of being made invisible. A “gendered lens” therefore helps us challenge what we take for granted or what we tend to overlook as marginal and unimportant – which is key to good foresight analysis. We next present three ways in which a GBA+ lens that draws on intersectional feminist research can enhance the method of foresight.

### **1) Recognizing the relevance of sex, gender, and intersectionality**

Gender-blindness, or assumptions of gender-neutrality, are common features of mainstream foresight analysis. Whether foresight analysts are able to see sex, gender, and intersectionality in the world they study often depends on the type of data and research they are drawing on. The following

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<sup>ii</sup> The unpredictable and unexpected (“wild cards”) but also the less obvious and loud (“weak signals”) are key focus areas of foresight (UNDP 2018, 27).

questions, developed by our DSFG GBA+ team (Eichler et al 2020), can help foresight analysts recognize the relevance of sex, gender, and intersectionality: What type of data are you relying on for your analysis? Do sex, gender, and intersectional considerations inform the data you are relying on? If not, what sex/gender and intersectional variables and factors could be missed as a result of your reliance on this data? What other data is available that may be more inclusive? How are you using and defining terms such as sex, gender, and intersectionality? Who collected the data that informs your foresight analysis, and how may the researcher's positionality (e.g., gender, race, ethnicity, class, nationality, or regional identity) have affected the data collection? Have you consulted with underrepresented groups to inform the questions used for data collection (e.g., Indigenous peoples, women and gender diverse people, Blacks and People of Colour, or other groups relevant to your research area)?

A key consideration in applying GBA+ to foresight analysis is the careful and consistent use of terms such as sex, gender, and intersectionality. Clearly distinguishing sex from gender allows for a more comprehensive application of GBA+, one that does not conflate gender with women's biology. Sex refers to biological classification on the basis of anatomical, hormonal, and chromosomal distinctions that are used to assign people to male, female, and intersex categories (Government of Canada 2018a). Gender refers to socio-cultural norms, expectations, and roles associated with masculinity and femininity. It is a social construct that is attributed to individuals on the basis of perceived sex. However, individuals may not identify with the sex they were assigned at birth. Sex and gender are distinct, but also often overlap. It may therefore be necessary to consider both sex and gender, and their intersections, in analysis. Additionally, one must look beyond gender as a binary construct in order to capture experiences across the spectrum of gender identity. Thus, a GBA+ lens should ideally consider the effects of foresight trends on women, men, non-binary, or gender-diverse people. It should also be intersectionally informed. Intersectionality is a framework developed by Black feminist legal scholar Kimberlé Crenshaw (1989) that demonstrates how gendered insecurity, oppression, and marginalization intersect with and are compounded by experiences of racialization, ethnicity, sexualities, Indigeneity, abilities, and more. GBA+ has its roots in an intersectional feminist approach, with the "plus" highlighting that gender-based analysis examines sex, gender, their intersections as well as intersections with a range of other identity and structural factors (Eichler et al. 2020).

It is also important to understand that there are different ways in which sex, gender, and intersectionality can be integrated into foresight, with consequences for its utility as a tool of analysis and decision making. It may be helpful for foresight analysts to consider whether they are using GBA+ to add descriptive content, causal explanation, or analytical insight (Scott 1986). If sex, gender, and intersectionality are applied as *descriptive* category, foresight analysts may consider how women and other historically marginalized groups are relevant to their scenarios. For example, where do women and other historically marginalized groups appear in the various scenarios—as actors or as impacted populations? If sex, gender, and intersectionality are applied as a causal category, the foresight analyst may ask how the position of women and other historically marginalized groups may impact different foresight scenarios. That is, how are gender and other intersecting inequalities challenged, or reinforced, by the various scenarios? Finally, if applied as an *analytical* category, foresight analysts would see sex, gender, and intersectionality as constitutive of their scenarios—as enabling what can be seen or not, what is seen as feasible or not in the future, and what may or may not disrupt current trends.

All three of these applications of sex, gender, and intersectionality are valid and helpful, but applying gender as an analytical category will render the most thorough type of GBA+. At a minimum, GBA+ adds an important descriptive layer to foresight. GBA+ can also bring to light how gender and intersecting inequalities shape and are shaped by particular foresight scenarios. But when we recognize sex, gender, and intersectionality as constitutive of the world we study, a GBA+ lens can fundamentally transform foresight analysis. Seeing structural inequalities rooted in racism, sexism, colonialism, heteronormativity, and more as constitutive of global politics and international relations fundamentally shifts how we understand the world as it is, its contradictions, and futures. Applying gender, sex, and intersectionality as analytical categories that are fundamental to the foresight questions we ask, our concepts, and our development of scenarios offers the most robust application of GBA+.

## 2) Diversifying expertise and knowledge

Foresight analysis is often limited by the biases—conscious and unconscious—of those engaged in developing the analysis, with detrimental consequences for its utility as a tool for decision making. Foresight analysis can benefit from more *diverse and inclusive* networks in order to capture “weak signals” that might otherwise be lost (Eichler 2020). The more diverse the participants involved in a foresight exercise, the more likely it will capture developments that are less obvious to those in positions of power and privilege or within particular institutional contexts. Institutional worldviews tend to produce common problem definitions as well as solution sets (English 2004; Okros 2020). Particularly in institutions such as DND/CAF, where employees are enculturated into a particular worldview, it is imperative that when foresight analysis takes place, a broad range of participants are included.

Asking the same questions and anticipating the same future problems are fatal limitations to foresight analysis, which is designed to imagine and describe a range of futures from the improbable, but potentially catastrophic, to the most likely. It is in this baseline or expected future scenario that a lack of diversity in the foresight group will most likely come into play, because the way in which we view our current world—the status quo—informs the manner in which we expect the future to unfold. It is very difficult to envision something you have never even contemplated, and thus the expected scenarios will most likely reflect the lived experiences of those doing the brainstorming. Capturing disagreements rooted in different perspectives and standpoints is essential for innovative foresight analysis (Lane 2020). It is therefore imperative to go beyond male-dominated expertise and elite knowledge.

Knowledge produced from experiences of marginalization offer important insights into underlying problems and potential crises that should be included in any foresight analysis. Considering the perspectives and experiences of a representative sample of society, and being mindful of the inclusion of marginalized groups, is key to producing high quality foresight analysis. Expanding representation in groups developing foresight analysis to include non-state affiliated actors and other individuals that are on the ground and closer to local realities such as think tanks, journalists, and civil society actors would enrich the foresight analysis by providing alternative views. Likewise, considering the geographic locations from which the experts come, encouraging the inclusion of perspectives from outside of the West, specifically from people in the regions affected by the foresight analysis and



its recommendations is key (Spanner 2020a).

Our DSFG GBA+ team (Eichler et al 2020) therefore suggest these key questions for foresight analysts to ask themselves as they integrate GBA+: What type of expertise are you relying on in the development of your foresight analysis? Does it reflect a particular standpoint in relation to gender, race, ethnicity, citizenship, age, class, sexuality, politics? What is the mindset of the people you are talking to— what are their narratives and mind frames—and how might they be shaped and limited by their position of power in society? Who is taking the lead on the research and deciding on the priorities for the foresight research agenda? What type of consultation is being undertaken to set the research agendas and priorities? Whose perspectives are represented on the research team and whose perspectives are missing? How has this shaped the research questions the analyst is asking? Can you identify biases in the expertise and sources you are using? Where do your authoritative voices and texts come from? Whom has the research that you use traditionally served? Are you drawing primarily from academic sources? What about locally situated knowledges or actors on the margins? Foresight analysis will be strengthened if it is applied in a way that takes these feminist-informed questions into account.

The predictive capability of foresight is reliant on the degree to which it recognizes and engages with diverse knowledge and challenges existing hierarchies of knowledge. As Cynthia Enloe explains, “making useful sense—feminist sense—of international politics requires us to follow diverse women to places that are usually dismissed by conventional foreign affairs experts as merely ‘private’, ‘domestic’, ‘local’, or ‘trivial’” (Enloe 2014, 3). Expertise lies in a host of places beyond those conventionally recognized. The GBA+-aware foresight analyst must therefore consider sources of expertise and knowledge beyond the male-dominated elite. Women’s groups, online communities, magazines, first-hand interviews with those impacted by conflict, materials developed by civil society groups, women working behind the scenes of public diplomacy (Enloe 2014), girl and women combatants (MacKenzie 2010), and female military spouses (Spanner 2020b) are all relevant sources of expertise to be considered in a GBA+-informed foresight analysis.

Applying a GBA+ lens to foresight analysis challenges the conventional definition of expertise, recognizing its common male-centric, masculinized, and elite biases. Foresight that begins with a more diverse group of foresight analysts, one that includes gender and intersectional diversity and diversity beyond conventional expertise, is more likely to capture less visible trends and thus provide more robust forecasting.

### **3) Expanding security actors and issues**

Feminist scholars argue that taking sex, gender, and intersectionality seriously allows us to see aspects of defence and security that would otherwise remain invisible (Enloe 2014; Wibben 2016). A GBA+ lens thus can enhance foresight analysis, making it more empirically accurate and nuanced. To that end, our DSFG GBA+ (Eichler et al 2020) team has developed these questions foresight analysts should ask themselves: Who are identified as key actors in your analysis? On what basis were actors included and excluded from your analysis? Does the research include first-hand accounts of diverse experiences? Are your concepts conceived in broad and inclusive ways to account for the experiences and perspectives of those not well represented in research and power structures? If not, how could

you consult with stakeholders that are not well represented in existing research? What histories are underrepresented in the foresight analysis? What assumptions do well represented histories perpetuate? Whose experiences are included or missing from the chosen histories? Is defence policy going to be shaped in the future by the actors, people, and topics we now most commonly associate with it? How do your scenarios account for less visible, feminized security actors and issues?

Rather than limit our analysis to the official places and times of military conflict, in which historically men have dominated, feminist scholars ask “where are the women?” (Enloe 2014). This simple question opens up the black box of defence policy. It enables a rethinking of security and defence beyond elite men, militaries, and militarism. Instead, we need to examine and take seriously the lives and actions of individual women (and men) at the bottom rungs of power (Enloe 1996; Enloe 2014). For example, feminist scholars highlight women’s multiple roles both in support of, and opposition to, war. Women are involved in multiple ways in preparing for war, waging war, and dealing with the aftermath of war (Enloe 2000; Wibben 2016). This insight also leads to a rethinking of what security *is*. Feminist scholars argue for a reconceptualization of security, highlighting that defence policy usually reflects the security and interests of the state and not of women and other marginalized groups in society. This shifts our focus from state to human security, women’s security in particular, and to non-militarized forms of security such as economic, food, or environmental security. Thus, feminist scholars challenge the binaries that have historically informed defence scholarship; gender binaries such as those between private/public spheres and low/high politics (Runyan 2019; Tickner 2001).

Similarly, feminist scholars emphasize the need to recognize a continuum of violence from battlefields to home fronts, across public and private forms of violence (Basu and Eichler 2017; Cockburn 2004). This gendered continuum of violence includes domestic violence, workplace sexual harassment and abuse, societal rape cultures, systematic war-time rape, military sexual trauma, and war-time sexual trafficking.

Thus, foresight is strengthened by expanding our view beyond conventional security actors (male soldiers, political leaders, defence contractors, etc.) to include women in their multiple roles. Moreover, conjugal and family dynamics (McKenzie 2010; True 2015), societal sex and gender relations (Hudson, Bowen and Nielsen 2020), and the gendering of military organizations (Enloe 2000) and war (Sjoberg 2013) are all important to consider in defence foresight analysis, as they, together, buttress the organization of violence across domestic and international spheres.

Next, we provide examples of how GBA+ can enhance Canadian defence and security foresight analysis, focusing on misinformation, cybersecurity, and military personnel issues in turn. Our analysis goes beyond adding GBA+ to existing foresight analysis. Rather, we show how a GBA+ analysis that is informed by an intersectional feminist lens can bring new actors, issues, and insights to light.

### **Example 1: Information warfare and influence operations: vaccine hesitancy and far-right conspiracy theory**

Foresight in the information domain has two interrelated components: forecasting how our adversaries might use information warfare against us, and, considering how the information domain interacts with any forecasted CAF missions, both domestic and expeditionary. In both cases, attention to gender and intersectional identity categories allows for a better understanding of the domain's opportunities and challenges. Political psychologists have long understood that race, sex, and class are related to enduring and consequential differences in how people interpret election messaging, identify with political ideologies, and respond to protest movements. There is evidence that these differences are becoming more pronounced as politics are becoming even more polarized (e.g., Hannagan, Larimer and Hibbing 2016). The CAF will have to operate in an environment in which information—and especially misinformation—is an increasingly important aspect of missions. It is crucial to anticipate how the intersectional identity factors of a mission-involved population will affect the CAF's room to maneuver in the future.

One strength of strategic foresight analysis is that it compels analysts to identify and dissect the assumptions that underpin both their research question, and their future scenarios. These assumptions shape the scanning phase of the foresight process, in which analysts search for signals or indicators of sentiments, trends, and change events. As noted above, *where* an analyst looks for signals is crucial to the robustness of their foresight, and this is influenced by the worldview of the analysts themselves.

For example, in 2021, as countries began to vaccinate against COVID-19, many people in Canada were surprised by the high levels of vaccine hesitancy amongst healthcare workers (Weikle 2021). Why would the very people who are most exposed to the brutal realities of the pandemic not be first in line to take the vaccine? What emerged is an instructive illustration of the value of intersectional analysis. Prior research has shown that vaccination rates vary with occupation, with healthcare workers in general and nurses in particular showing lower rates than doctors (see Wicker and Rabenau 2011). Sex is an identified factor in vaccine refusal, with most data showing that more women than men have been receiving the COVID-19 vaccine. However, most healthcare workers, writ large, are women: registered nurses, licensed practical nurses, image technicians, eldercare aides, and others. So why were these vaccination gaps among health care workers persisting? Other intersectional factors are at play. Healthcare workers, especially in large urban areas that have been hardest hit by the pandemic, are also likely to be drawn from racialized, immigrant communities who have been in general underserved by culturally- and linguistically-appropriate COVID-19 information outreach. Polling data has shown that vaccine hesitancy is higher in lower-income demographics (Environics Analytics 2021). Healthcare workers are generally underpaid, and do not have effective sick day provision, making it difficult for them to attend offsite vaccine clinics even if they wish to be vaccinated. Moreover, while they receive some training or education in the sciences, "healthcare worker" and "scientist" are not synonymous, nor do most healthcare workers receive advanced education. As such, expecting one standard response to vaccination uptake from healthcare workers, as a group, was uninformed. Paying attention to the class, race, and sex makeup of healthcare workers would have enabled public health officials and campaign organizers to better prepare effective, tailored vaccine messaging.

Beyond understanding the demographic and psychological terrain the CAF might be expected to operate in, as with vaccine distribution, there are two aspects of the information environment that CAF must be prepared for: deliberate misinformation seeded by an adversary and conspiracy theories (whether natural or planted). GBA+ analysis can aid the CAF's ability to be prepared for these. With the 2021 political violence in the United States, the QAnon conspiracy cult has increased in salience, and many commentators have been taken by surprise that QAnon is spread along gendered and classed differences. Previous research has shown that education (and to some extent, income) is predictive of conspiracy belief, and that men are more likely than women to engage in "conspiratorial" thinking (van Proolijen 2017). Although QAnon as a specific conspiracy is focused on Donald Trump, and thus more likely to attract right-of-centre adherents, the overlap with vaccine hesitancy is producing a master narrative of "conspirituality" that is equally at home in leftist, upper-middle-class natural health movements personified by Goop CEO Gwyneth Paltrow (Gavura 2021). In a description of what one Canadian researcher has deemed "pastel QAnon," feminist analysis allows us to see the roots of the appeal of "conspirituality" to women: women's online communities are described as "lifestyle influencers, mommy pages, fitness pages, diet pages, and alternative healing" (Argentino 2020). Vaccine skepticism and QAnon seem to be trending together in alternative health communities (Cheetham 2021). These communities are often at best vaccine skeptical, and more often opposed to vaccination altogether.

Close attention to intersectional gender analysis can help explain the popularity of QAnon among women. As anyone who had spent any time in mother- or woman-focused online spaces would know, many women are somewhat skeptical of the healthcare establishment due to longstanding patterns of (mainly male) physicians and specialists ignoring, trivializing, or denying female-specific or primarily female health conditions like endometriosis, fibromyalgia, chronic Lyme disease, and multiple sclerosis (for a discussion of Lyme in particular, see Dumes 2020). Black and Indigenous women are even less likely to trust doctors, with documented ill effects of healthcare racism, especially around pregnancy and childbirth (Bourassa, Starblanket, and Anderson 2020; Centers for Disease Control and Prevention 2019). As a result, women are more likely to turn to alternative health practitioners, as well as online communities where women share information and products such as herbal medicine, naturopathy, elimination diets, yoga and more with each other (see Keshet and Simchai 2014). Without asking why women are drawn to these online spaces—without a feminist analysis of the disproportionate job losses by women since the COVID-19 pandemic, or of the societal messaging that encourages women to focus on their weight and appearance, and perhaps most importantly, of the social isolation which comes from being at home with small children in a world which values people primarily for their economic impact—no analysis of the information domain can be complete. Understanding *where* women are online, and *why* they are there, as well as how these affect their susceptibility (or resilience) to misinformation or conspiracy, is vital to being able to accurately forecast the CAF's informational terrain of engagement.

As with the cases of COVID-19 vaccine hesitancy and pastel QAnon, two things would help the CAF develop better information domain awareness. First, having intersectional feminist analysis baked into the initial stages of the foresight process, at the stage of identifying assumptions: for example, if there were to be an Operation Lentus-type callout in Toronto, it cannot be assumed that every resident would welcome CAF members on the streets, even if they were there to help. Refugees and

new Canadians from many countries have had negative experiences with security personnel in their countries of origin, for example, and women in particular may view a military uniform as a precursor of sexual harassment or abuse. As was recognized (albeit clumsily) with the 2020 deployment of CAF members to long-term care homes, informational and influence effects will continue to grow in importance, even in domestic operations. This leads to another takeaway: comprehensive foresight analysis requires there to be analysts who know where to look for what women, racialized communities, and people of different socio-economic classes are saying to each other. This necessitates rethinking both expertise and scanning, and envisioning a foresight cell in which so-called mommy blogs—and knitting pattern sites, yoga YouTube channels, dog breeders' forums, clothing sales sites, NextDoor groups, and anarchist zines—are considered legitimate loci of information, and their users, legitimate experts. This is *diversity* in its most fundamental sense: what isn't seen (or even imagined) cannot be scanned, so having analysts from different backgrounds and identities is crucial to robust forecasting.

### **Example 2: Gender, technology, and cybersecurity futures**

Feminist scholars are inherently concerned with envisioning alternative futures in which the gender-based inequalities and violence that characterize the present are removed. If we understand "futures" studies as embedded in larger research on technology, artificial intelligence, and enhancing human predictive capacity, then we can broadly discern two related issues. The first issue is that mainstream futurism has framed issues like technology and economics as hyper-technical, value-neutral, and therefore gender-blind (Gunnarsson-Ostling 2011, 1032; Milojevic 2008). In this way, value-neutrality or objective truth becomes what Donna Haraway (1988) and others have called the "god trick"; western patriarchy's scientific claim to a universal, empirical truth or shared reality that all people can intuitively access through reason (see also Crasnow 2013). The "god trick" ought to be recognized as NATO forces increasingly rely on advanced technology in warfare, and "artificial intelligence, especially in an age of 'big data', can also appear to have omniscient power that appears everywhere and nowhere at once" (Wilcox 2017, 13). The danger here is that the "god trick" encourages blindness towards the "informatics of domination" or those structures that discourage introspection into the "social relations of science and technology" (Haraway 1985, 167).

The gendered implications of AI are demonstrated by the results of a survey of approximately 100 undergraduate and PhD candidates in the Department of Cybernetics at the University of AI in Reading (UK) (Ferrando 2014). The survey found that students "placed a clear emphasis on male characters: while the cyborg was thought of as neutral or male by the large majority, out of more than one hundred interviewees, no one thought of robots in feminine terms" (Ibid, 6). Ferrando argues that "if the genealogy of knowledge silently informing AI is reduced to a male legacy" scholars run the risk of reinscribing present forms of discriminatory knowledge and practices into the development of future AI technology (Ibid, 6). Research demonstrates that issues like the preexisting biases against women and the BIPOC community have been imported into many of the algorithms upon which AI relies (Garcia 2016). Likewise, Wilcox (2017) fleshes out the practical consequences of the "god trick" in a critical feminist analysis of drone technology. In drawing our attention to the violence and biases inherent in surveillance technology, Wilcox reveals how drone targeting produces particular racialized and gendered bodies as "either killable or manageable" (Ibid 14). These examples highlight that there is a need to understand that in setting scientific research agendas and selecting trends and alternative scenarios there will be biases built into the construction of the what if scenario under study. In other

words, these studies are not just participating in a *what if* exercise, but in a more normatively oriented process of *what should be*.

Cybersecurity as an area of military interest can be parsed into two fields of engagement within the information domain: the Internet and the Intranet. The first concerns threats on the **Internet**, meaning the global networked domain. Concerns within this field revolve around psychological operations (PSYOPS), like targeted messaging and deradicalization. So, for example, gendered social network analysis would allow one to see how online communities of DAESH-supportive social networks operate (Tait, Clark and Saleh 2020).<sup>iii</sup> From a defence perspective, this information can be used to guide messaging campaigns, influence recruitment and retention, and more. In these studies, the focus generally concerns communities becoming de-territorialized and “uploaded” to the cyber domain, bringing misogyny, racism, and homophobia with them. It is possible that in the wake of the COVID-19 pandemic, these challenges are becoming even more pronounced as the cyber domain is the only place communities can now safely gather.

White nationalist networks like the “Three Percenters” and “Proud Boys” provide useful case studies for understanding how online social networks can quickly become a security threat. These groups have utilized social media networks to propagate their ideology and incite acts of domestic terrorism, motivating some experts to define the “Three Percenters” as the “most dangerous extremist group in Canada” (Hutter 2018). We now know that the gender ideology of a dark network has a formative influence on its structure (Tait, Clark and Saleh 2020). In some instances, the ideology of the social network forces the creation of subsidiary networks intended only for female-identifying members (for instance the “Proud Boys’ Girls”) (SPLC 2021). Conversely, male “incel” communities are fundamentally anti-woman, and instead use gendered narratives to justify femicide (Bratich and Banet-Weiser 2019). Narratives of masculinization can also be manipulated to recruit new members to the network, and scholars have argued that homophobia and anti-feminist belief are “now central recruitment pathways into the online white nationalist movement” (Bjork-James 2020, 176). Therefore, the CAF needs to pay attention to the gendered narratives within online social networks to accurately predict and deter their behaviour.

The second field is the **Intranet**, or the connected online community within the CAF and DND. Within this field, the concern is generally around breaching the borders through various forms of hacking and espionage, including insider threats from servicemembers or civilian staff who are unaware that they are leaking information. Consider the differential impact of data breaches within these private networks: for women and LGBTQ2+ members of these organizations, compromising their private information (including home addresses, contact information and medical records) may put them at increased risk for violence in the real world (Brown and Pytlak 2020).<sup>iv</sup> For example, a 2016 breach in São Paulo revealed the private medical records of 650,000 patients, including the medical records of women who had received abortions, exposing both the women and their doctors to the possibility of criminal prosecution (Ibid, 13). A similar incident occurred in Chile in 2016, exposing both women who had

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<sup>iii</sup> DAESH is the Arabic acronym for ISIL, or the Islamic State of Iraq and the Levant.

<sup>iv</sup> The acronym for LGBTQ2+ is used to refer to the following communities: Lesbian, Gay, Transgender, Bisexual, Queer and Questioning, Two-spirited, and other gender or sexual minorities.

received morning-after treatment for suspected pregnancies and the identities of those living with HIV (Ibid). There are also indications that gender plays a significant role in cybersecurity beliefs and practices. For example, men report having lower cybersecurity policy compliance than women (Anwar et al 2017, 1).

Despite the importance of cybersecurity, and gendered knowledge therein, very few women can be found in the field. The most talented individuals need to be recruited and retained in order to respond to cyber threats, and the current system is not encouraging or enabling this process (Poster 2018). Cybersecurity sits at a particularly misogynistic intersection of militarism and IT/computational science, both of which tend to be dominated by men, often to the extent that these are not simply exclusionary spaces, but spaces in which sexual violence is actively encouraged (Gotell and Dutton 2016). This issue must be ameliorated if NATO forces want to respond to current information warfare. The perspectives and insight of diverse personnel are particularly important in countering disinformation campaigns. Gendered and racial narratives are central to the messaging campaigns of sub-state actors, like white nationalist organizations as discussed above, and adversarial state actors, like Russia, both of whom rely on the manipulation of identity politics to undermine domestic security and bolster their support abroad (see Aceves 2019; Johnson 2018; Wilner 2018).

### **Example 3: The future of operational readiness: military personnel and family policies**

Operational readiness and organizational effectiveness are priorities of Western militaries, ones that are particularly challenging to achieve in an increasingly complex and uncertain security environment. The ability to deploy CAF members quickly and efficiently, and to have them succeed in the conduct of their operations, is typically approached by focusing on individual and unit capabilities through training, equipment, and readiness management (Department of National Defence 2019). In addition to these important considerations, attracting, recruiting, and retaining quality personnel is also a necessary component of operational readiness and organizational effectiveness. Indeed, the CAF recognizes that personnel is key to mission success. DND/CAF's current defence policy *Strong, Secured, Engaged* places "supporting people" at the forefront of its strategic long-term goals (Department of National Defence 2017). Moreover, having the forces reflect the diversity of the Canadian population, including gender, sexual, racial, linguistic, and Indigenous diversity, is recognized as contributing to the strength of the forces (Edgard, Mangat and Momani 2020). To foster an inclusive and diverse workplace, the Defence Team Management Program has implemented a number of activities and initiatives, including a gender-based analysis of CAF policies and the implementation of Defence Employment Equity Advisory Groups for four designated target groups: visible minorities, Indigenous people, persons with disabilities, and women. Moreover, the CAF is responding to recent and increasing concerns over sexual misconduct, which especially affects women and LGBTQ2+ members (Deschamps 2015; Government of Canada 2021). From a foresight perspective, what does the future of recruitment and retention look like for militaries? Who is being recruited? What personnel issues should be considered with regard to attracting and retaining a diverse force? And what future trends for personnel are likely to affect operational capacity, such as quick and flexible deployments?

Applying a GBA+ lens to foresight analysis challenges us to consider how expertise and knowledge associated with certain places, people, and issues are undervalued, if not invisible. The future of CAF recruitment, retention and operational capacity is, and will continue to be, informed

by what is traditionally considered less central to defence and security policy—family dynamics and military home life. Studies reveal that organizational outcomes such as personal wellbeing, institutional morale, organizational commitment, and attrition rates are dependent on military members' satisfaction with their conjugal relationships, perceived spousal support, and spousal support for the member's career (Laplante and Goldenberg 2018, 30). Heteropatriarchal family dynamics have long facilitated operational effectiveness and organizational outcomes (Basham and Catignani 2018; Chisholm and Eichler 2018; Enloe 2000; Spanner 2020c).<sup>v</sup>

However, Canada's workforce is characterized by a new generation of current and would-be CAF members, whose employment choices and practices are shaped by time- and location-specific socioeconomic concerns, and which have distinct values, world views, and perspectives on ideal employment and workplace culture (Coynne 2019; Tanner 2010). Increasingly, this means having work-life balance, flexibility with work schedules and locations, a consideration for family issues, support for a variety of family forms, and a destabilization of gender norms and labour practices in families (Atlantic n.d.; Ng and Johnson 2015, 121-122; Risman 2018; Tanner 2010). For instance, most two-partner families in Canada consist of both adults pursuing careers for financial or personal fulfillment reasons, and this dynamic is on the rise (Statistics Canada 2016, 2017). That is, the male-breadwinner model of the family, and its associated dynamics, are on the decline. This shift in paid labour practices within families and households are at odds with the military's relocation requirements, often to bases in isolated regions with limited employment opportunities for the "trailing" spouse, as well as the military's reliance on the unpaid domestic labour of civilian spouses. Likewise, Canadian men and fathers are spending more time on domestic labour, including parenting (Houle, Turcotte and Wendt 2017), which puts into question the feasibility of the military as a "total institution." These developments in home and family life, and their intersections with military recruitment and retention, are likely to be exacerbated by the new generation's approach to balancing work and life more equitably.

How home and family life intersect with CAF recruitment and retention is especially important in light of the efforts to diversify the forces. This is a particularly important consideration given recent and future interest by the CAF to attract and keep women in its ranks (Government of Canada 2019). Indeed, the CAF has been struggling to recruit and retain women (Coynne 2019). Despite advancements in the equitable distribution of gendered labour within households and families, women still take on most of the domestic responsibility (Houle, Turcotte and Wendt 2017). At the same time, social expectations of gender reinforce that the duty of care, such as childrearing, is essential to femininity and is a responsibility that ought to be prioritized by women. When women do not live up to socially prescribed feminine ideals, they are disciplined through social stigma for being less than feminine. Gendered norms of motherhood come into conflict with career questions, especially in the military, because of its continued privileging of masculinity and heteronormativity (Catignani and Basham 2021; Chisholm and Eichler 2018; Spanner 2020c).

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<sup>v</sup> Traditionally, this has called for heteropatriarchal formations of the military family and military, characterised by women as civilian spouses who structure their activities, identities, and efforts in support of military objectives and the military member's career (Enloe 2000). For example, gender norms have required that military spouses relocate willingly for new postings, take on most of the domestic labour to accommodate deployments and its aftereffects, and adhere to a breadwinner model of the family, where the military member's career and salary is foremost, while the spouse's career and income are superfluous (Basham and Catignani 2018; Catignani and Basham 2021; Chisholm and Eichler 2018; Hyde 2016; Segal 1986; Spanner 2020b; Spanner 2020c).



This was the case for Sub-Lt Laura Nash, who was forced to choose between maintaining custody of her son and keeping her job in the military (Brewster 2017). Sub-Lt. Nash's operational requirements were so demanding that support by Military Family Resource Centres and extended family members did not sufficiently cover the care deficit for her immediate family. Specifically, Nash was given a deadline to complete a training program, which required her to be separated from her son while there was no one to care for him. The consequence for not completing the training program by the deadline would be loss of her job. The CAF did not grant Nash more flexible work accommodations, such as a training deadline extension or childcare assistance, and she was forced to leave the military (Brewster 2017).

The challenges of balancing work and family life and its intersections with recruitment and retention, which are exemplified by Sub-Lt Nash's case, reveal another current and future defence and security issue: how is military service experienced and accommodated by those with non-normative families, that is, those families which do not adhere to a heteropatriarchal structure? For example, what are the considerations for dual-service couples (a conjugal partnership where both parties serve in the military) who need to accommodate two military careers, including potential conflicts around postings, deployments, and courses? While more than 1-in-2 women in the CAF belong to a dual-service couple, the same is true for less than 1-in-10 men (Manser 2018). This means that women CAF members have greater challenges balancing work and family life, which is compounded by the gender norms discussed above. Likewise, how feasible is military service for those belonging to families that are characterized by lone parents? The number of lone-parent families continues to rise in Canada (Statistics Canada 2018) and it is women who account for 8-out-of-10 lone parents (The Vanier Institute of the Family 2015).

As family structures, dynamics, and households continue to evolve in Canada, future personnel scenarios in militaries should also consider the rise of multigenerational families (Battams 2017; Statistics Canada 2019). The number of seniors living with their children and grandchildren is growing. This raises questions about military family benefits and support programs, and who is included as "family." Moreover, the rise of multigenerational families involves increased care considerations, which are especially timely during a global health pandemic, and are affecting women's care burden at higher rates than men's (Power 2020). As multigenerational families are more likely among immigrant and Indigenous families (Battams 2017; Statistics Canada 2019), these questions are especially important for the CAF to consider if it wants to increase the recruitment and retention of a racially and ethnically diverse force, one that is more reflective of the makeup of Canada today and in the future.

These questions are not only relevant to the recruitment and retention of a diverse force but also to these groups' contributions to operational effectiveness, including the ability to train and deploy. These questions are especially timely given the persistence of sexual misconduct in the CAF (Wells 2021), as well as its failure to reflect a diversity of personnel in its leadership and otherwise (Fraiman 2021) — both of which demonstrate the continued celebration of a militarized masculinity that deters women and marginalized Others from considering employment in the CAF. The CAF would greatly benefit from examining future challenges to operational effectiveness through a GBA+ lens, bringing into view the centrality of personnel issues that intersect with family and home life.

## CONCLUSION: SHAPE OF THE FUTURE OR SHAPING THE FUTURE?

As this working paper has argued, the method and practice of foresight analysis can be enhanced and even transformed through an intersectional feminist lens. Such an approach goes beyond a narrow and post-hoc application of GBA+. GBA+ has its roots in intersectional feminism, and if these roots are taken seriously, we can reap the full benefits of its guiding principles. This means questioning gender-blindness, but also whose expertise, what kind of data, and what kind of actors and topics are privileged in our foresight analysis. An intersectional feminist approach to defence and security forecasting emphasizes bottom-up analysis that goes beyond elite actors and militarized notions of defence, and that is also cognizant of how foresight analysts are themselves embedded within existing relations of power. Therefore, foresight analysts must ask themselves: How does your foresight analysis reinforce or challenge existing power relations? Who benefits from the implementation of the outlined recommendations (e.g., foreign actors, local citizens, or local political elites)? What groups will be involved in responding to and implementing the recommendations that flow from your foresight analysis? Who is undertaking this work? What power dynamics are likely to be produced by the implementation of your recommendations? Have there been any consultations with the impacted groups in question?

The examples discussed in this paper show that a GBA+ lens that is informed by intersectional feminist research brings new, often overlooked, issues into the parameters of security and defence: vaccine hesitancy, conspiracy theories, personnel issues, and family relations. But an intersectional feminist lens also sheds new light on existing topics of defence and security foresight analysis such as cybersecurity and operational effectiveness. A consistent and thorough application of GBA+ can yield important benefits for foresight analysts who are likely to miss signals that *appear weak* due to their association with women, femininity, or other marginalized actors and issue areas.

Finally, an intersectional feminist lens on foresight has broader political implications. Feminist-informed foresight will ask not only how sex, gender, and intersectionality are implicated in various potential future scenarios, and how these futures might reinforce or challenge gender and intersecting inequalities, but also how we can envision social and political change in the defence sector (and international relations more broadly) aimed at reducing existing gender and other intersectional inequalities. This is where feminist futurists come in: in not just integrating an intersectional sex and gender lens into foresight, but recognizing *foresight as a feminist tool of change* (Shallowe 2020). This could be a valuable application of foresight for a feminist government like that of Prime Minister Trudeau, in the defence sector and beyond. It leaves us with the question of what an alternative feminist-informed defence policy for Canada could look like (Eichler 2016).

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