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Does Raising the Combat Exclusion Lead to Equality? Measuring the Recruitment, Retention, and Promotion of Women in Canada and New Zealand's Defence Forces

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Introduction

Does the integration of women into combat roles improve gender equality in the military? This question has been at the forefront of many national military debates in recent decades. Most international militaries have officially excluded women from serving in so-called frontline combat roles, through a series of policies often referred to as the combat ban or "the combat exclusion."[1] Debates about whether women can and should participate in frontline combat roles have been contentious, emotional, and shaped by gendered norms and stereotypes.[2] Internationally, this is an area of rapid policy change. The Australian Defence Force (ADF) announced an end to the combat

[1] Megan MacKenzie, *Beyond the Band of Brothers: The US Military and the Myth That Women Can't Fight* (Cambridge: Cambridge University Press, 2015).

[2] MacKenzie, *Beyond the Band of Brothers.*; See also Elizabeth Kier, "Homosexuals in the U.S. Military: Open Integration and Combat Effectiveness," *International Security* 23 (1998): pp. 5–39 for these debates echoed about LGBT service people.

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exclusion in 2011, and the United States (US) announced in 2015 that all combat positions would be open to women.[3]

Approximately 20 countries in the world allow women to serve in combat, although the number of women serving in these roles is often low.[4] Across international cases, justifications for restricting women from combat have included arguments that women are physically weaker than men and negatively impact troop cohesion and military effectiveness.[5] Conversely, a range of presumed positive impacts have been linked to removing the combat exclusion, including: improving recruitment, retention, and promotion rates; reducing sexual harassment[6]; shifting cultural attitudes towards women;[7] and, improving the fighting capacity of security operations.[8] The combat exclusion policy is understood as both a cause of and potential solution for a broad range of gender-related problems in the military. However, there has been minimal empirical analysis of the impacts of removing the combat exclusion. Although there is a body of research exploring the arguments for keeping women out of combat,[9] there has been less effort to evaluate whether the military is, or is not, positively transformed when the combat exclusion is removed.

This article assesses whether lifting the combat ban impacts three core indicators of gender equality: recruitment (both generally and into combat roles), retention, and promotion rates. We use the Canadian Armed Forces (CAF) and New Zealand Defence Force (NZDF) as case studies, as these militaries opened combat roles to women in 1989 and 2000 respectively, allowing for longitudinal analysis.[10] Our data indicate that the

[3] Matthew Rosenberg and Dave Philipps, "All Combat Roles Now Open to Women, Defense Secretary Says," *The New York Times*, 3 December 2015.
[4] Sarah Percy, "What Makes a Norm Robust: The Norm Against Female Combat," *Journal of Global Security Studies* 4, 1 (2019): pp. 123–38.
[5] Anna Simons, "Women in Combat Units: It's Still a Bad Idea," *Naval Postgraduate School* (Monterey CA, 2001); Martin van Creveld, "The Great Illusion: Women in the Military," *Millennium*, June 2016.
[6] Martin Dempsey, "Women in Combat Pentagon Press Conference," 24 January 2013.
[7] Judith Stiehm, *Arms And The Enlisted Woman* (Philadelphia: Temple University Press, 1989), p. 2989.
[8] Sahana Dharmapuri, "Just Add Women and Stir?" *Parameters* 41, 1 (2011): pp. 56–70.
[9] Anthony King, "The Female Combat Soldier," *European Journal of International Relations* 22, 1 (2016): pp. 122–43; Megan MacKenzie, *Beyond the Band of Brothers*.
[10] Canada removed the combat exclusion after two servicewomen took CAF to the Canadian Human Rights Tribunal in 1989, which ruled that the exclusion was discriminatory. In New Zealand, women were able to serve in combat roles in the Air Force as early as 1988. The General Chief of Staff issued a

raising of the ban has not led to expected improvements in recruitment, retention, or promotion rates, based on the militaries' own goals. We argue that this gap between expectation and reality demonstrates that a single policy change is too limited to evoke the recruitment, retention, and promotion improvements that militaries often seek, but whose root causes are often embedded in gendered cultures both inside and outside the military. Policy tools such as lifting the combat exclusion are blunt, in that they assume that the means to achieving equality is to *add more women* and that more women will enter the military once formal barriers to participation are eased. In this article, we unpick the endurance of this policy rationale and show how it has shaped the expectations placed on the removal of the combat exclusion. We argue that this policy rationale may limit an institution's commitment to creating more wide-ranging solutions and specific policy initiatives that target recruitment, retention, and promotion. In addition, the belief that removing the combat exclusion will lead to equality places extreme pressures on incoming women to *be the solution*. Indeed, research indicates that attempting to integrate women into traditionally male-dominated roles without systematic efforts to improve the culture or change leadership practices can set women up for hardship and failures.[11]

This article makes three significant contributions with international implications. First, as indicated, gender integration is an area of rapid international policy change; our analysis provides evidence that could be used to inform national militaries that have recently opened combat to women or are considering allowing women into combat roles or previously male-only positions. Second, this article makes a substantial contribution to theoretical discussions about the potential to *regender* and positively transform not only the military, but other historically male-dominated institutions.[12] Specifically, it confirms the limitations of approaches that assume institutions merely need to *open doors* to ensure women gain equal footing within a workplace, and points to the persistence of this attitude inside the military. *Regender* is a concept that refers to

memo in 2000 that combat roles across the services would be fully integrated over the following four years; in 2007 a *Human Rights (Women in Armed Forces) Amendment Act* was issued, making restrictions on women's employment opportunities within the forces illegal.

[11] Sarah Childs and Mona Lena Krook, "Should Feminists Give Up on Critical Mass? A Contingent Yes," *Politics Gender* 2, 4 (2006.): pp. 522–530.

[12] Claire Duncanson and Rachel Woodward, "Regendering the Military: Theorizing Women's Military Participation," *Security Dialogue* 47, 1 (2016): pp. 3–21.

the potential to make positive, if incremental, changes to historically masculine and male-dominated institutions towards reducing sexism and promoting gender equality. Theoretically, this paper contributes to ongoing debates about the capacity of military institutions to adapt and regender, or become more welcoming for women. It also responds directly to calls from scholars like Duncanson and Woodward to use available empirical data to evaluate long-standing assumptions about the effects of allowing women into combat, "in order to establish how, in practice, transformatory change might work."[13] We draw attention to the ways that positive predictions about the impacts of removing the combat exclusion have relied on critical mass theory and we build on existing critiques of the theory in our analysis. In particular, we identify what we see as one of the weakest elements of critical mass theory: that the requirement to *wait and see* what happens when an institution hits 25-30 percent cannot provide insight into institutions that are slow to, or may never, hit this threshold. This (conveniently) eliminates institutions such as the military from its analytical remit until such a time as the threshold is met. However, critical mass theory makes no temporal prescription, only one for descriptive representation. As we demonstrate in this paper, the defence forces demonstrate belief in critical mass theory, consistently setting targets for descriptive representation of women, but then postponing the deadline of the targets indefinitely into the future.

Finally, this article makes a major empirical contribution. Given that gender integration remains an important priority for national defence forces, including Canada and New Zealand, we note our surprise at the decentralized availability of data that tracks gender integration. We acknowledge that there are endogenous and exogenous factors that impact gender integration in militaries, including broader social norms, institutional efforts to attract women, budget cuts (such as those that occurred in CAF in 1989 and 2008-9) or commitments to recruitment efforts, and fluctuations in deployments that might require bolstering or cutting service members. In the following sections, we discuss these data challenges, but argue that, nevertheless, this paper is valuable because it confirms that these militaries are not on track for a *critical mass* of women to be achieved. We use these findings to argue that not only alternate policies,

[13] Ibid., p. 14.

but alternate policy *rationales*, ones informed by a belief in the need for structural change rather than improved descriptive representation, need to be pursued.

The article unfolds as follows. First, we discuss the possibilities for achieving gender equality in the military and examine how raising the combat exclusion may or may not help achieve it. Second, we map the range of predictions about the presumed impacts of removing the combat exclusion, finding the most consistent predictions to be that the lifted ban will improve recruitment, retention, and promotion for women. We then outline our method, presenting the available data from the two case countries and outlining our framework for measuring progress. Finally, we canvas our findings, arguing that none of these three indicators showed the improvements expected, which helps to problematize the logic on which the policy removal was based.

(How) Can Militaries Achieve Equality?

In this section, we identify the theoretical debates around gender equality, which we argue are conducted in the background of policy decisions such as the removal of the combat exclusion and whose logics are implicit in these policies. We identify two primary strains of feminism, namely liberal feminism and anti-militarist feminism, and suggest that they make distinct arguments about how best gender equality can be achieved. Liberal feminism draws a link between gender equality and descriptive representation. Meanwhile, anti-militarist feminism questions whether, if at all, institutions such as the military can be 're-gendered', without first instigating systemic cultural shifts.

Liberal Feminism

Liberal feminism has traditionally viewed women's inclusion into and full participation in public life as its central goal. Military service is considered one of the ways of exhibiting equal participation in the public sphere, and for women to earn their right to equal citizenship.[14] As we argue below, liberal feminist thinking has been

[14] Ilene Feinman, *Citizenship Rites: Feminist Soldiers and Feminist Antimilitarists* (New York: NYU Press, 2000); Judith Stiehm, *Arms And The Enlisted Woman* (Philadelphia: Temple University Press, 1989).

significant in informing calls for the removal of the combat ban, which is viewed as one of the last barriers to this equal participation in the military.[15] The combat exclusion has regularly been described as a *brass ceiling*, that is, a barrier which, if shattered, would enable women to attain equality with their male peers in the military, specifically via the ability to be promoted to higher ranks. This theoretical framework yields a focus on descriptive representation, and its impact on debates around how to achieve gender equality in the military is palpable. Military researchers Major Anne Reiffenstein[16] and Karen Davis,[17] for example, suggest that gender integration can be measured through recruitment, retention and promotion rates. We discuss these measures further below.

Likewise, critical mass theory has historically focused on women's participation and representation levels, arguing that, if enough women are integrated into male-dominated fields, there will be myriad gender-positive effects. The two primary positive effects are: first, a critical mass of women is presumed to improve the institution, opening up individual opportunities for women and enhancing the organization's culture, [18] and second, a critical mass is presumed to also lead to better outcomes for women outside of the institution.[19] For example, Jane Mansbridge argues that "descriptive representation by gender improves substantive outcomes for women in every polity for which we have a measure."[20] While the exact percentage of women remains debated, a number of sources cite 30 percent as a critical mass.[21]

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[15] Anne Summers, "Give Women A Fighting Chance," *Sydney Morning Herald*, 14 January 1999.

[16] Major Anne Reiffenstein, "Gender Integration: An Asymmetric Environment," in *Women and Leadership in the Canadian Forces: Perspectives and Experience*, pp. 1-10, edited by Karen Davis (Winnipeg: Canadian Defence Academy Press, 2007).

[17] Karen D. Davis, "Organizational Environment and Turnover: Understanding Women's Exit from the Canadian Forces," *Unpublished Masters Thesis,* 1994. http://digitool.library.mcgill.ca/R/?func=dbin-jump-full&object_id=26258&local_base=GEN01-MCG02.

[18] Rosabeth Moss Kanter, *Men and Women of the Corporation* (London: Basic Books, 1977).

[19] Marian Sawer, "What Makes the Substantive Representation of Women Possible in a Westminster Parliament? The Story of RU486 in Australia," *International Political Science Review* 33, 3 (2012): pp. 320–35; Joni Lovenduski and Pippa Norris, "Westminster Women: The Politics of Presence," *Political Studies* 51, 1 (2003): pp. 84–102.

[20] Jane Mansbridge, "Quota Problems: Combating the Dangers of Essentialism," *Politics and Gender* 1, 4 (2005): p. 622.

[21] Drude Dahlerup, "From a Small to a Large Minority: Women in Scandinavian Politics," *Scandinavian Political Studies* 11, 4 (1988): pp. 275–298; Drude Dahlerup, "The Story of the Theory of Critical Mass," *Politics and Gender* 2, 4 (2006): pp. 511.

Although the logic that more women is incontrovertibly better than less women is appealing, some critics question the tenets of critical mass theory. For example, research suggests that the mere presence of women does not necessarily result in "different and distinctly feminine outcomes."[22] In addition, Childs and Krook[23] argue that there is neither a single nor universal relationship between the phenomenon of descriptive representation and substantive representation, finding that increased numbers of women can even lead to a backlash against them, reducing their effectiveness.[24] In the context of the military, Brenda Moore, for example, demonstrates that there are more African-American women in the US military than other races, but that their over-representation does not translate to equal treatment.[25] Finally, Carroll finds that women may be forced to assimilate to the masculine norms embodied by the institution and be transformed by it rather than transforming it.[26] As discussed below, we also see that critical mass informs the goals set by the militaries in our study, and to this literature, which makes critiques of the possibility for substantive change, we also add a temporal critique, arguing that critical mass theory obfuscates the question of *how long* progress towards equality should take.

Anti-militarist and 'Progressive-militarist' Feminism

[22] Lissa Lamkin Broome, John M. Conley, and Kimberly D. Krawiec, "Does Critical Mass Matter? Views from the Boardroom," *Seattle University Law Review* 34, 4 (2011): p. 1051; See also: Karen Celis, Sarah Childs, Johanna Kantola, and Mona Lena Krook, "Rethinking Women's Substantive Representation," *Representation* 44, 2 (2008.): pp. 99–110.
[23] Childs and Krook, "Should Feminists Give Up on Critical Mass?" pp. 522–530
[24] See also Ann Towns. "Understanding the Effects of Larger Ratios of Women in National Legislatures." *Women & Politics* 25, 1-2 (2003): pp. 1–29.
[25] Brenda L. Moore, "From Underrepresentation to Overrepresentation: African American Women," in *It's Our Military Too!: Women and the US Military*, edited by Judith Stiehm, pp. 115–35 (Philadelphia: Temple University Press, 1989).
[26] Susan J. Carroll, ed. *The Impact of Women in Public Office* (Bloomington: Indiana University Press, 2001); See also Sandra Grey, "Numbers and Beyond: The Relevance of Critical Mass in Gender Research," *Politics & Gender* 2, (2006): pp. 492–502.

Anti-militarist feminists have pushed back against liberal feminist views that the "right to fight" is an important step towards institutional change within the military.[27] They argue that the military is an inherently hyper-masculine, sexist institution that could never be changed in ways that would allow for the equal inclusion of women.[28] According to this perspective, the opening of combat roles to women may not make the military a more attractive employer, nor change how women who are present in the military are treated. Instead, per this account, we would expect to continue seeing women represented in lower ranks, and not promoted or retained as highly.

While anti-militarist feminists might predict that the removal of the combat exclusion would not lead to substantive changes, progressive militarist feminists use the concept of regendering to describe the possibility of change in institutions.[29] Regendering is often associated with incremental improvements that can coalesce into systemic institutional change. Thus, liberal, anti-militarist and progressive militarist feminists offer competing predictions about the removal of combat exclusion. Duncanson and Woodward argue that evidence-based research, rather than ideological battles, may be the only way to break the apparent stalemate between liberal, progressive militarist, and anti-militarist feminists. They argue that researchers must pay "close attention to empirical evidence around the numbers and proportion of women personnel employed and deployed by the armed forces. This means engaging with recruitment, retention, and promotion of women personnel, in the context of wider personnel strategies for armed forces."[30] This article proposes to do this.

[27] Elizabeth Mesok, "Sexual Violence and the US Military: Feminism, US Empire, and the Failure of Liberal Equality," *Feminist Studies* 42, 1 (2016): pp. 41–69; Cynthia Enloe, *Maneuvers: The International Politics of Militarizing Women's Lives* (Berkeley: University of California Press, 2000).
[28] Claire Duncanson, "Anti-Militarist Feminist Approaches to Researching Gender and the Military," in *The Palgrave International Handbook of Gender and the Military*, edited by Rachel Woodward and Claire Duncanson (London: Palgrave, 2017), p. 53.
[29] Duncanson and Woodward, "Regendering the Military," pp. 3–21; See also: Cynthia Cockburn and Meliha Hubic, "Gender and the Peacekeeping Military: A View from Bosnian Women's Organizations," in *The Postwar Moment: Militaries, Masculinities and International Peacekeeping*, edited by Cynthia Cockburn and Dubravka Zarkov, pp. 103–21 (London: Lawrence & Wishart, 2002).
[30] Duncanson and Woodward, "Regendering the Military," pp. 3–21;

The Link Between the Combat Exclusion and Gender Equality

We shift now from academic debates to the expectations placed by policy-makers on removing the combat exclusion across several international contexts. To provide the most comprehensive picture of these expectations, we present data not only from the case countries of this article (Canada and New Zealand) but also from Australia and the US, which opened combat roles to women recently. In doing so, we evidence that these expectations are widespread and occupy the status of conventional wisdom. Specifically, we analyzed media from domestic Canadian, Australian, and New Zealand newspapers using a three-year window of the announcement of the removal of the combat exclusion (1988-1990, 2010-2012, and 1999-2001 respectively). In addition to this media analysis, we draw on public remarks made by government officials (including the Canadian Human Rights Tribunal) and military personnel announcing the removal of the exclusion in each country.

Evidence indicates that, of the theories and sources of prediction regarding removing the combat exclusion, policymakers and military leaders have consistently drawn on critical mass theory. For example, three internally-conducted Canadian integration reports directly utilized *critical mass*, explicitly arguing that a critical mass of women may assist retention if young women saw more female role models, moved into mentoring positions themselves, and avoided feelings of isolation that can reduce morale.[31] During the 24 January 2013 press conference announcing the US removal of the combat exclusion for women, Martin Dempsey tied the need for a "critical mass" of women in the military to upward mobility.[32] Finally, CAF's target for female representation has been around 25 percent since 1999.[33] The assignment of 25 percent matches other critical mass figures often cited in the services, parliament, and human resources. However, no military has been able to meet this target.[34] This raises the

[31] Leesa Tanner, "Gender Integration in the Canadian Forces - a Quantitative and Qualitative Analysis," Department of National Defence: Ottawa, (1999): pp. 74-75.; See also: Dean Beeby, "Men Only, Submariners Indicate," *The Globe and Mail*, 9 February 2000; "Women Do Poorly in Battle Training," *The Globe and Mail*, 26 June 1995; Leah Eichler, "Three Events in the Past Week Reflect a Cultural Shift in Perceptions about Women in Leadership Roles," *The Globe and Mail*, 1 February 2013.
[32] Martin Dempsey, "Women in Combat Pentagon Press Conference," 24 January 2013.
[33] Deborah Cowen, *Military Workfare: The Soldier and Social Citizenship in Canada* (Toronto: University of Toronto Press, 2008).
[34] As of 2019, CAF's goal is 25.1 percent female representation by 2026.

question of why the target for female representation is set this high and leads us to argue that it is set at this figure because military policymaking is informed by critical mass theory. It is difficult to challenge or even test the critical mass theoretical assumptions discussed above, in such a context. Unfortunately, however, the notion that no substantive changes will occur until such a target is reached risks forestalling the gathering of empirical data indefinitely. We argue that it is worth analyzing the data that we have now, as this may help better inform policy.

The following section details the assumed positive impacts of removing the combat exclusion and the connection between these predictions and critical mass theory. In our analysis, we found several overarching sets of expectations linked to removing the combat exclusion. We further outline the widespread nature of these claims and provide examples. From there, data from Canada and New Zealand's Defence Forces are presented in order to evaluate whether improvements have indeed occurred in recruitment, retention, or promotion, following the opening of combat roles to women.

Recruitment

The underlying logic linking the removal of the combat exclusion with improved recruitment is a belief that allowing women to work in more roles within the institution makes the defence force a more attractive employer. In turn, there is a persistent case made that opening combat roles to women will improve women's overall representation in the military. This was part of the rationale behind the Canadian Human Rights Tribunal's decision, which stated that "[CAF] must … reflect societal values and changes [regarding equal opportunity for women] … for it could not otherwise attract young recruits."[35]

Furthermore, the idea that lifting the exclusion would widen the pool of recruits and therefore improve dwindling force sizes became one of the strongest arguments for

[35] Canadian Human Rights Tribunal, "Tribunal Decision 3/89 Between: Isabelle Gauthier, Joseph G. Houlden, Marie-Claude Gauthier, Georgina Ann Brown (Complainants) And Canadian Armed Forces (Respondent)," Ottawa, 1989: p. 6.

lifting the combat exclusion in Australia.[36] The concern is also embedded in CAF's Military HR strategy,[37] and in the New Zealand press.[38] A 2009 Sydney Morning Herald article summarizes: "Though we do not suggest women would flock to join combat units if they could, that lingering prejudice [the combat ban] probably explains why joining the ranks is not in the forefront of women's minds: of every 20 women who show some interest in recruitment, 19 think twice and abandon the idea."[39]

Retention

A second anticipated outcome of removing the combat exclusion has been that it could improve female retention. Retention is a greater priority for many forces than simple recruitment.[40] While some level of attrition is inevitable for men and women, women's attrition rates are higher than men's across the lifecycle of their career in most militaries.[41] As a result, mid- and late-career servicewomen are lost and the investment made in their training with them.[42] Lifting the combat exclusion has been viewed as a means of bringing female attrition rates on par with men's, for reasons including improvements to women's career progression possibilities, and the assumed increase in respect developed for women placed on equal footing with men lowering the incidence

[36] Tom Allard, "Women, Your Armed Forces Need You," *Sydney Morning Herald*, 24 March 2008; Jo Chandler, Simon Mann and Paola Totaro, "What If It Were a Woman?" *The Age*, 14 April 2011; Brendan Nicholson, "ADF 'in Need of New Faces,'" *The Australian*, 3 March 2015.

[37] Lise Bourgon, "The CF as an Employer of Choice: The Key for a Successful Gender Integration," Kingston: Canadian Forces College, 2007; Department of National Defence, "Military HR Strategy 2020: Facing the People Challenges of the Future," Ottawa: Canadian Communication Group, 2002.

[38] Jackie Blue, "National Supports Equality in Defence Forces," *Scoop*, 7 December 2006; Cathie Bell, "Report Highlights Sex Wars in Defence Force," *Dominion Post*, 6 November 1998.

[39] "Keeping Women in Uniform," *Sydney Morning Herald*, 23 November 2009; See also: Mackenzie, *Beyond the Band of Brothers*, p. 186; Paul Grigson,"Let Women Get Nearer the Battle, Says Forces Chief," *Sydney Morning Herald*, 9 February 1990.

[40] Beth J. Asch, John A. Romley, and Mark Totten, *The Quality of Personnel in the Enlisted Ranks* (Santa Monica: RAND Corporation, 2005).

[41] Davis, "Organizational Environment and Turnover," p. 5; Ministry of Defence, *Maximising Opportunities for Military Women in the New Zealand Defence Force* (Wellington: Ministry of Defence, 2014).

[42] In New Zealand, attrition costs taxpayers $100 million a year (Michael Fox, "'One in 10' Female Soldiers Harassed," *The Press*, 14 February 2014.). See Keith Thomas and Steve Bell, "Competing for the Best and the Brightest: Recruiting and Retention in the Australian Defence Force," *Security Challenges* 3, 1 (2007): pp. 101–2, for a discussion of the impact in Australia.

of harassment and bullying. For example, in 1996 the Australian Defence Force commissioned scholar Clare Burton to review gender integration and women's retention in the forces. One of Burton's findings was that female attrition rates are high because of limited career prospects. She writes that "if career prospects were better, women would put up with some of the other features of the situation that contribute to their resignation rates." [43] Similarly, prominent liberal feminist Anne Summers commented in 1999 that in order "to improve career prospects, all jobs and all training opportunities need to be open to all service personnel based on merit and ability, not gender."[44] In Canada, the removal of the combat exclusion has been linked to retention via the notion that women may feel socially isolated in CAF. In 1997, Canadian Major Howard Michitsch made the argument that "the army's problem is that it has never managed to assemble a large enough critical mass of women combat soldiers to make them feel comfortable."[45]

Promotion

A third persistent argument has been that entry into combat positions would result in more women in leadership positions within the services, thereby breaking the so-called brass ceiling. This is because "most of the positions banning women [are] exactly the ones that women need to advance through the armed services."[46] This was one of the stated rationales in the Human Rights Tribunal decision in Canada to remove all barriers to combat:

> … unless the MMR [minimum male requirement] is reduced or eliminated in a number of trades and occupations it may well inhibit women who

[43] Clare Burton, "Women in the Australian Defence Force. Two Studies: The Cultural, Social and Institutional Barriers Impeding the Merit-Based Progression of Women and the Reasons Why More Women Are Not Making the Australian Defence Force a Long-Term Career," Canberra: Defence Centre, 1996: p. 195.
[44] Anne Summers, "Give Women A Fighting Chance," *Sydney Morning Herald*, 14 January 1999.
[45] Jeff Sallot, "Annie Get Your Gun, Combat's Calling You," *The Globe and Mail*, 19 December 1997.
[46] Caroline Kennedy-Pipe, "Liberal Feminists, Militaries and War," in *The Palgrave International Handbook of Gender and the Military*, edited by Rachel Woodward and Claire Duncanson (London: Palgrave, 2017), pp. 23-38.

want or are qualified for training, but who may not see long term promotion opportunities.[47]

Similarly, the Canadian Parliamentary Committee's recommendation that all restrictions on women's employment be dropped was based on the belief that excluding women from job opportunities, including combat roles, limited women's promotion in the Forces due to a lack of experience in combat occupations.[48]

In Australia in 1999, an exodus of female service people was blamed in the press on a lack of career opportunities.[49] In 2011, when former Defence Minister Stephen Smith announced the removal of the combat exclusion, he linked the removal of the policy and improvement in female promotion rates: "… this change will effectively enable into the future women to fall for consideration for all of the positions including the highest."[50] Former Australian Army Chief Peter Leahy also articulated this position, stating that opening combat roles will "broaden" women's experience and "increase the likelihood that they'll be able to compete more for senior appointments."[51] The US Service Women's Action Network (SWAN) has also advocated for the removal of the combat exclusion on this basis.[52] As such, we can observe across these different discussions that the removal of the combat exclusion is systematically linked to anticipated improvements in three key areas.

Data and Methods

In this section, we outline the data we have collated and used to measure the impact of lifting the exclusion on recruitment, retention, and promotion in the CAF and NZDF. Although a positive and significant first step, we highlight some limitations. Finally, we outline our rationale for using the data we have to measure a) recruitment via shifts in rates of representation and distribution across military occupations, b)

[47] Canadian Human Rights Tribunal,.
[48] Jeff Sallot, "Annie Get Your Gun."; Canadian Human Rights Tribunal.
[49] Gervase Greene, "Crisis Among Defence Force Women Denied," *The Age*, 21 January 1999.
[50] Dan Oakes, "Women in Line for Top Brass," *Sydney Morning Herald*, 28 September 2011.
[51] Dan Oakes, "Women Can Fight Way to Top," *Sydney Morning Herald*, 27 September 2011. https://www.smh.com.au/national/women-can-fight-way-to-top-20110927-1kvim.html.
[52] Kennedy-Pipe, "Liberal Feminists, Militaries and War," p. 29.

retention via aggregate attrition rates, and c) promotion via rank distributions and a calculated promotion rate. In all cases, in order to measure progress, we compare changes a) over time b) against, where available, targets the forces have themselves established and c) against male rates for the available indicator.

Available Data

Canada

The majority of the Canadian data was acquired from the Library of Parliament Canada (yielding data for Financial Years 2004 - FY 2015) and a freedom of information request. There are five types of Canadian data. The first is aggregate numbers and percentages of women and men, largely in the Regular Force. We use this data to measure recruitment. The bulk of the data extends back only to 1989, which is the year when the combat exclusion was lifted. This is a limitation of the data, as it may be preferable to have data that precedes the lifting of the ban. We attempt to rectify this by also including a graph for the entirety of the Defence Force (both regular force and reserve), which extends to 1970. However, it must be noted that the bulk of the subsequent four types of data does not extend this far back. Nevertheless, we believe it reasonable to measure across these twenty-seven years (1989-2016),[53] as changes would only have been observed post-1989, and per the rationale of the policy, improvement is meant to be observed in an upward trend regardless of the time span.

The second type of Canadian data is by Military Occupational Code (MOC), which shows the specialties chosen by enlisted officers and non-commissioned members (NCMs). There are thirteen modern officer MOCs, and there are fifteen NCM MOCs. The 13-MOC and 15-MOC data span 2004-2015. This modern data has been manipulated to allow for historical analysis between 1989-2015. We aggregated these MOCs into *operations*, *engineering*, *medical/dental*, and *support* (4-MOC) in the case of officers, and *combat arms*, *sea ops/tech*, *air ops/tech*, *electrical and mechanical*, *military engineering*, *communications*, *medical/dental*, and *support/logistics* (8-MOC). We have provided this 4-MOC and 8-MOC because it allows us a longer time span, and to

[53] In the case of the MOC and promotions data, it spans only up until 2015 rather than 2016.

portray the distribution of women across the specialties. This enables the visualization of whether women are re-distributing across all MOCs, opting for non-support roles more often, and choosing to enter operational and combat roles.

The third type of Canadian data is by rank, for officers and non-commissioned members. This data spans 1989-2015, and as with the MOC data, allows us to capture numbers and percentages of women within each rank, as well as women across the ranks, in order to visualize whether women are re-distributing across all ranks. A fourth, connected, type of data is calculated promotions data, which is available between 2004-2015. Both measures are used to together craft a picture of female promotions. The final type of Canadian data is attrition data for men and women. It is available between 1989 and 1997, after which there is a gap until 2003. Post-2003 (2004-2015) data has been calculated by the authors by dividing total force strength by total released, which is a standard way to measure attrition.

New Zealand

The NZDF data comes in three forms. The first is aggregate numbers and percentages of women and men in the forces, divided by service (Navy, Army, Air Force) rather than MOC, spanning 1990-2015. We use this data to measure recruitment. The second available type is rank data, by the percentage of women in each officer and NCM rank, spanning 1998-2013. We use this data to measure promotions. The final type of data is attrition percentages for men and women, which spans 2004-2013. We use this data to measure retention.

Limitations

There are a few limitations to the data. First, it was often selective, with some years and key pieces of information not publicly available, or the data summarized every few years without including raw annual data. We have noted instances where there are years missing in the data, via breaks in the graphs below. In cases where there have been a few different means of measurement, we have chosen the option with the maximum number of years available. For example, NZDF female representation data exists across both 1990-2015, and 2000-2016, in different forms. We have opted for the

former, due to its longer timeframe, although it is not as contemporary. Second, although data is collected annually in both forces, it is not always published, and inconsistent efforts are made to map it longitudinally. Upon request, we have acquired the most contemporary of the available reports. However, in some cases, the NZDF data terminates in 2013 and CAF in 2015. Every effort has been made to update the data to 2016.

A third limitation to the data was that it was collected and published in inconsistent ways, with definitions and means of measuring recruitment, retention, and promotion changing over time. In particular, Canadian MOC data has been presented inconsistently and was not standardized until 2003. Finally, despite evidence that Black women and women of colour face specific and more intense forms of discrimination within the military, we do not have data disaggregated by both race and gender, or both ability and gender. While we were able to overcome methodological challenges, we note the secondary political significance that these limitations have, which is that data inaccessibility limits the ability to understand demographic trends and to create a more inclusive and responsive military, which is a stated objective for CAF and NZDF.

Measuring Improved Recruitment

For parsimony and to take advantage of data availabilities, we measure recruitment through the total percentage of men and women in CAF and NZDF over time. While CAF provides specific data on enrolment rates, NZDF does not, so recruitment for the purpose of this paper could also be termed *representation*.

Progress on recruitment is measured, simply, against the forces' own targets. Both CAF and NZDF have set 25 percent as their target. Canada's target has existed for some time, while NZ adopted its target in 2018. It is reasonable to measure progress by whether the rate of improvement observed in these charts will allow the targets to be met by the set years of 2026 and 2025 respectively.

A second measure of recruitment for Canada is across the MOCs, with particular attention to combat arms; in 1989, the CAF was issued a 25 percent target for women in combat arms within ten years, which was abandoned upon failure in 1999 (Schaefer et

al. 2015, 38). Although CAF has no specific target now, this data is important to include, as it is particularly damning if raising the combat exclusion for women has not yielded improvements in representation in combat arms. Furthermore, improvements in combat arms are tied, as discussed above, to promotion and retention rates. If there is no palpable increase on this measure then this has consequences for the entirety of the policy, which assumes that simply allowing it will cause women to enter the specialty. Our reference point for progress is modest and is measured by whether the proportion of women in combat roles is near to reaching 25 percent the proportion of men in combat roles. Of all men in CAF, about one-third are in combat roles – this translates to expecting 8-9 percent of women to be in combat roles.

Measuring Improved Promotion

Promotion is measured both by rank data for NZDF and CAF, in addition to calculated promotions data for CAF. As with recruitment, a determination of progress is set against the NZDF's target, which is to reach 20 percent lieutenant colonels, and 20 percent sergeants and warrant officers, to be increased by 2 percent annually until reached. Therefore, it would be reasonable to expect to see 2 percent increases per annum in the upper ranks. CAF has no specific targets, so we provide distribution data to visualize whether there has been a re-distribution of women into the middle and upper ranks. We also introduce our own measure, which compares rates of promotions of women versus men (women promoted / total number of women). This second measure yields surprising positive results, discussed below.

Measuring Retention

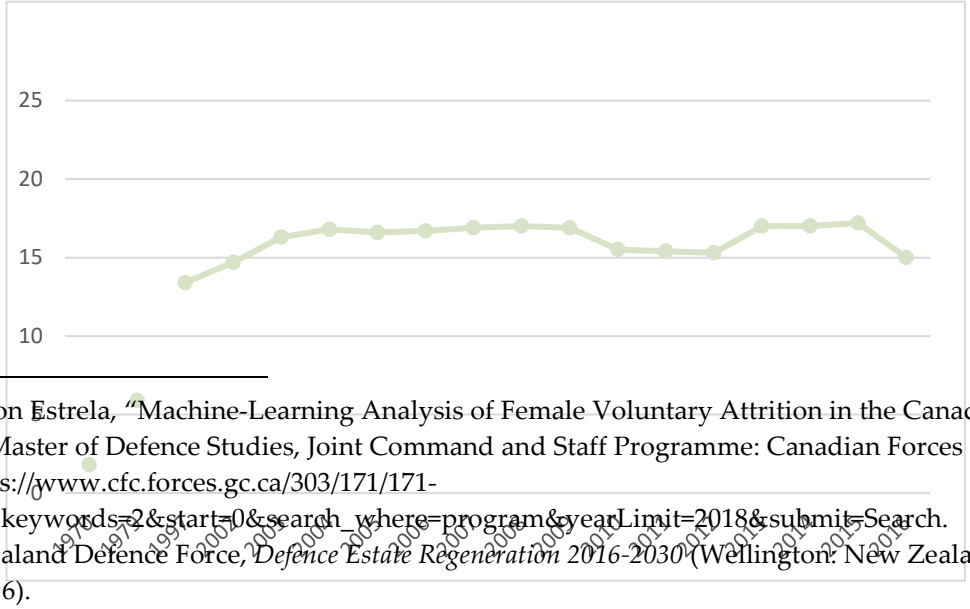
Retention rates are measured by attrition of both men and women, specifically whether women's attrition rates are matching men's, now that the exclusion has been lifted. It should be acknowledged that attrition data by years of service (YOS) may be a more valid additional measure, given that the argument about women is that they leave the services in later years when they butt up against the brass ceiling. CAF retention

across YOS data, however, is not made available to those outside the forces.[54] We have attempted to fill this gap by providing both regular force and officer attrition for men and women in the case of CAF. In the case of the NZDF, we have been constrained by data unavailability. As we have noted, this paper functions as an initial opportunity to observe key measures of gender equality over time in two case countries, so it is reasonable to use this aggregate measure as a means of reflecting on the effectiveness of raising the ban on combat. As our analysis shows, there are other enduring factors that contribute to women's attrition rates for which raising the combat exclusion has not been, nor can be, a panacea.

Though we distinguish recruitment, retention, and promotion for the purposes of measurement, we acknowledge that these indicators can be overlapping and interconnected. As discussed above, promotion and recruitment rates influence retention rates. Furthermore, most forces link the challenges of recruitment and retention together, assuming that they can be targeted and improved via the same or similar policies, for example increased remuneration. For example, the NZDF's 2016 White Paper defines "recruitment and retention" as a singular goal.[55]

Results from Canada

Recruitment



[54] See, Jason Estrela, "Machine-Learning Analysis of Female Voluntary Attrition in the Canadian Armed Forces," Master of Defence Studies, Joint Command and Staff Programme: Canadian Forces College, 2018. https://www.cfc.forces.gc.ca/303/171/171-eng.html?keywords=2&start=0&search_where=program&yearLimit=2018&submit=Search.

[55] New Zealand Defence Force, *Defence Estate Regeneration 2016-2030* (Wellington: New Zealand Defence Force, 2016).

Figure 1: Percentage of Defence Force which is female (1970-2016)[56]

[56] Department of National Defence, "Canadian Armed Forces Employment Equity Report" (2003-2015); Department of National Defence, "Women in the Canadian Armed Forces," 18 March 2016; Suzanne Simpson, Doris Toole and Cindy Player, "Women in the Canadian Forces: Past, Present and Future," *Atlantis* 4, II (1979): pp. 226-283.; Nicola Holden, *Canadian Forces 2001 Self-Identification Census: Methodology and Preliminary Results* (Department of National Defence Canada, Ottawa, 2003); Jungwee Park, "A profile of the Canadian Forces," Statistics Canada, no. 75-001-X, 2008.; Joseph L. Soeters and Jan Van Der Meulen, eds. *Cultural Diversity in the Armed Forces* (London: Routledge, 2007).

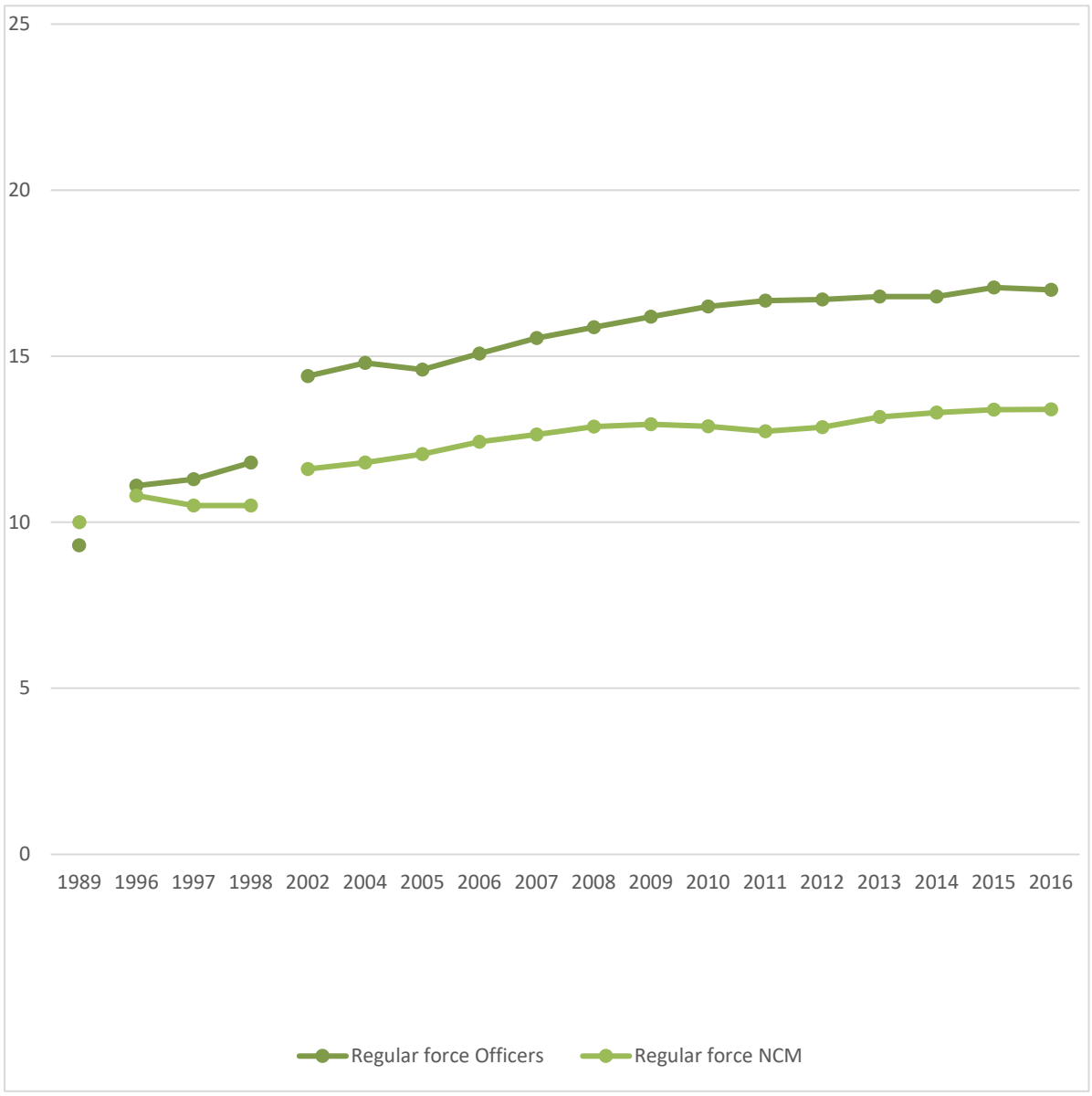


Figure 2: Regular force female representation, percentage of total 1989-2016[57]

[57] Leesa Tanner, *Gender Integration in the Canadian Forces - a Quantitative and Qualitative Analysis* (Department of National Defence: Ottawa, 1999); Leesa Tanner, *Female Participation in the Regular Force of the Canadian Forces (1989-1997)* (Department of National Defence: Ottawa, 1997); Leesa Tanner, *A Synopsis of Female Participation in the Regular force of the Canadian Forces* (Department of National Defence: Ottawa, 1996); Jungwee Park, "A profile of the Canadian Forces."; Statistics Canada. "Canadian Armed Forces Regular Force and Primary Reserve Members Who Witnessed or Experienced or Personally Experienced Sexualized or Discriminatory Behaviour, or Who Were Sexually Assaulted, 2016 and 2018," 22 May 2019.

Figure 1 shows incremental progress, with an annualized growth rate of 0.5 percent throughout the seventies and eighties, and an approximately 0.2 percent growth rate throughout the nineties and 2000s. Although Figure 2 shows there has been more growth in the proportion of officers, it is reasonable to conclude that the lifting of the combat exclusion has not triggered a sufficient acceleration of growth. CAF's own lack of confidence in meeting its 25 percent target is confirmed by their 2014 attempt to lower it.[58]

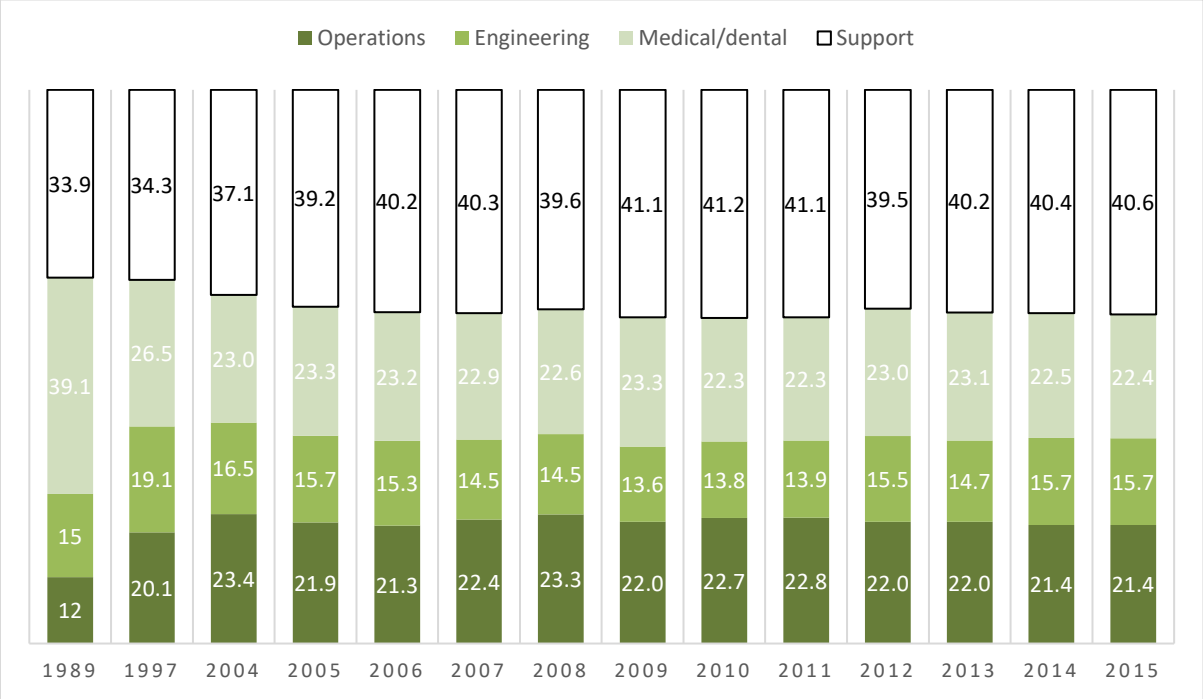


Figure 3: Distribution of female officer military occupational specialties 1989-2015

https://www150.statcan.gc.ca/n1/daily-quotidien/190522/cg-a002-eng.htm.; Department of National Defence (2003-2015).

[58] Lee Berthiaume. "Canadian Military Hopes to Cut Hiring Targets for Women, Minorities." *Ottawa Citizen*, 19 May 2014.

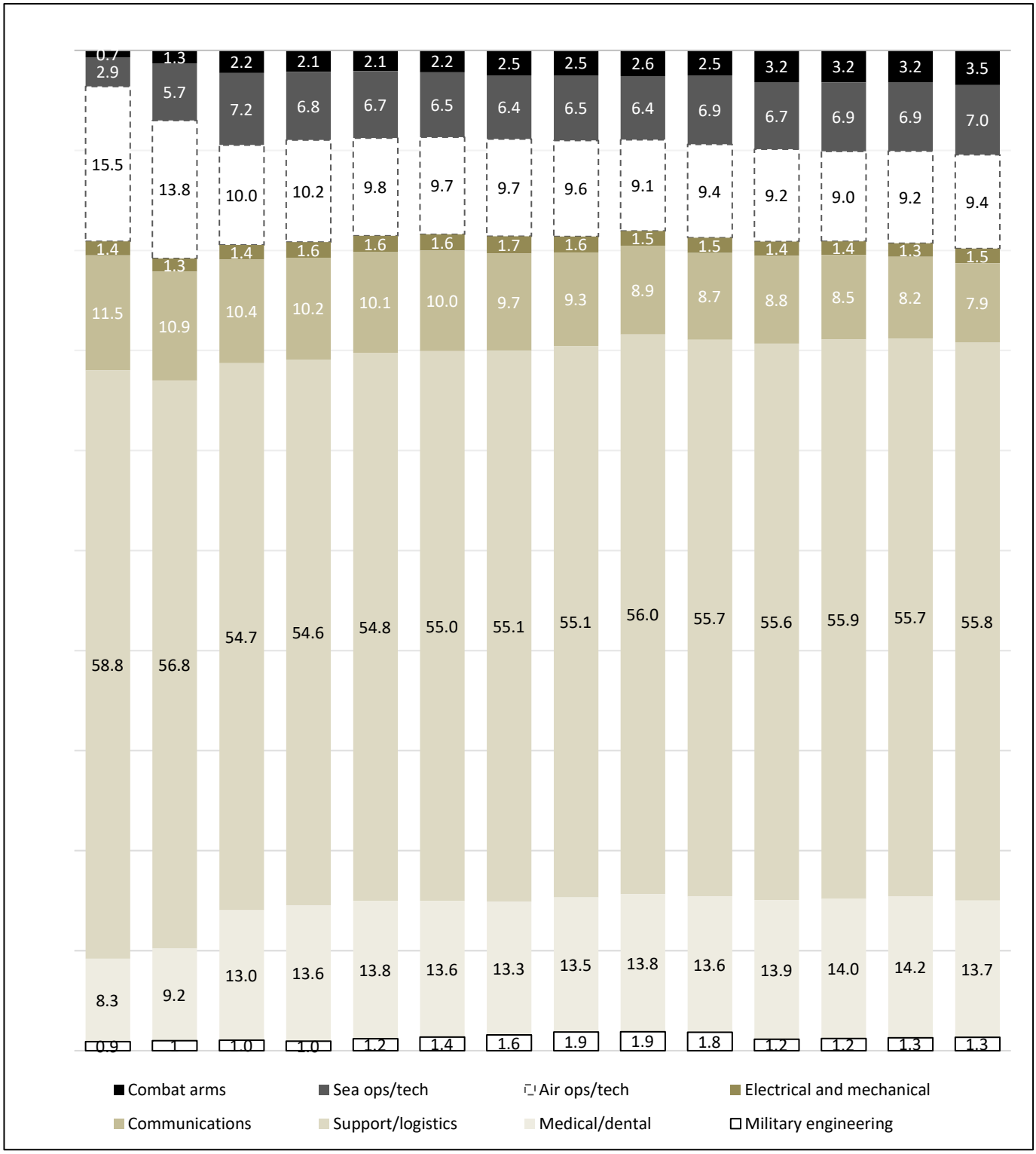


Figure 4: Distribution of female NCM military occupational specialties 1989-2015[59]

Figures 3 and 4 show the distribution of female officers and NCMs across the MOCs per year. They show how women are spread across the forces, rather than the percentage of women in each MOC. For example, in 1989, the most popular specialty for female officers was medicine and/or dentistry. After the downsizing of the services in the early nineties and the focus on CAF's operational capabilities, this distribution began to shift. The specialties open for enrolment were mainly operational ones in this period, leading to both an overall drop in female enrolment, and an increased proportion of enrolments going to operations, which includes combat. By 2015, the most popular specialty for women was support, with small redistributions experienced across operations and engineering. In the case of the officer data, *operations* includes combat arms, as well as naval operations, air operations, and pilots. While there is no disaggregated combat arms distribution data, as of 2016 the percentage representation of female officers compared to male officers in combat arms was only 4.6 percent. As for NCMs, no significant changes in gendered patterns of labour have occurred across this twenty-eight-year period. Over half of women in the forces are still in supports/logistics, and combat arms does not have 25 percent of one-third represented, nor does it appear to be trending this way.

Retention

As discussed, both CAF and NZDF have expressed a consistent need to enhance retention rates of women. The charts below suggest that aggregate attrition has improved for women in CAF.

[59] 1989 and 1997: Tanner (1997); all others Department of National Defence (2003-2015).

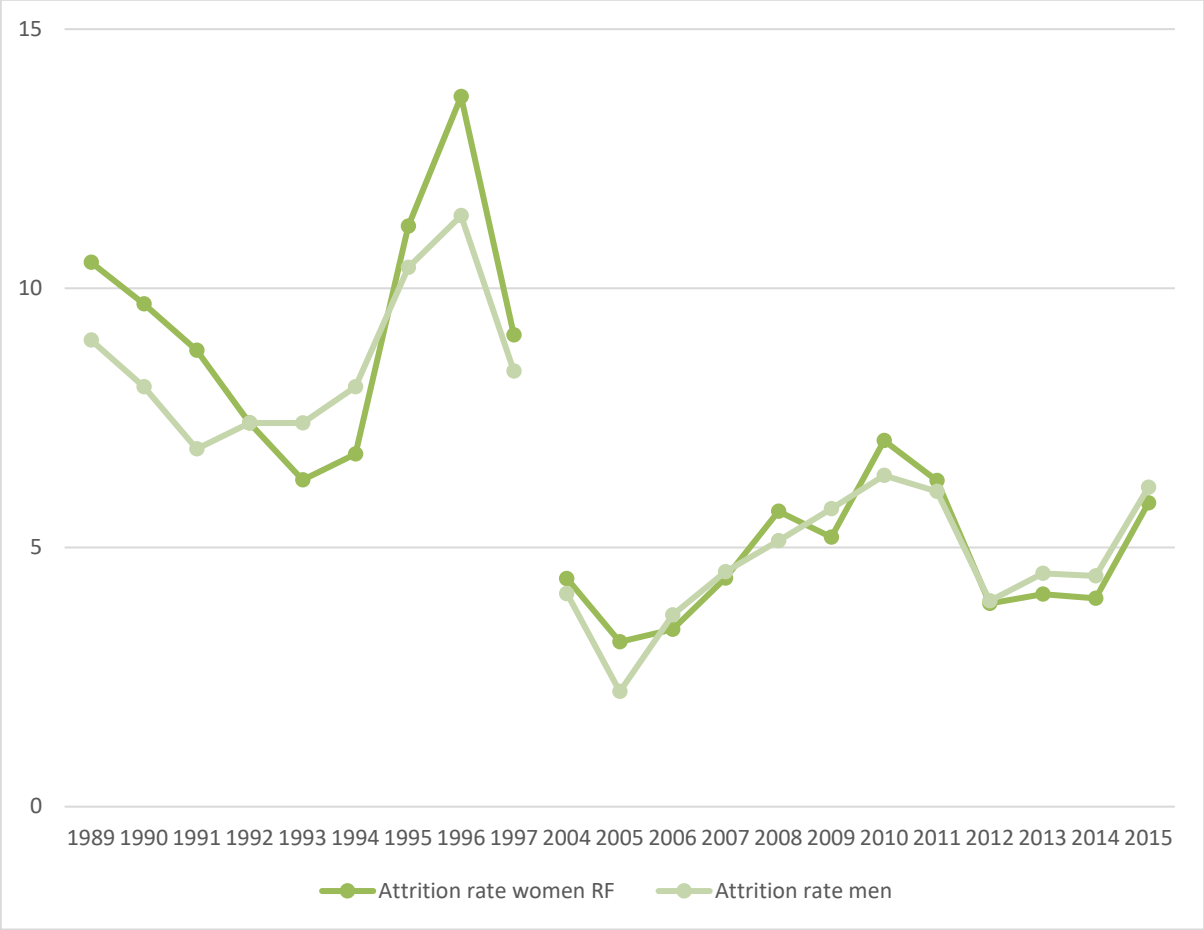


Figure 5: Total regular force attrition 1989-2015[60]

[60] Tanner, "Gender Integration in the Canadian Forces." 2004-2015 data calculated from dividing total force strength by releases, based on Department of National Defence (2003-2015).

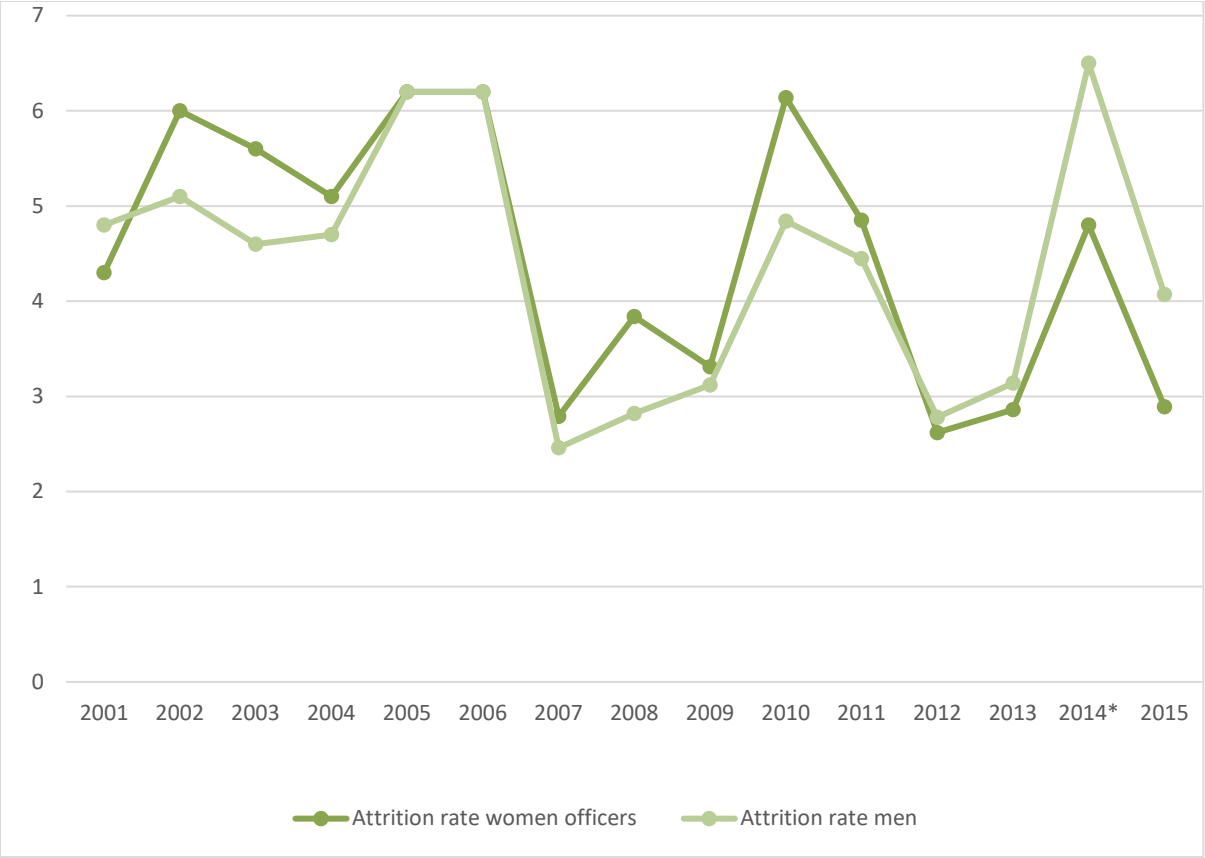


Figure 6: Total officer attrition 2001-2015[61]

These graphs demonstrate that, as expected, attrition rates went up in Canada after 1995, when the CAF was offering exit packages as a means to cut costs. After that, the gap between men and women narrowed and, in the case of officers, the trend inverted. The findings are quite mixed, however, suggesting the need for further investigation of YOS data, as the more significant loss of women happens in the middle and upper ranks. Because women in the forces are likely to be a more self-selected group, the loss of male cadets is known to be high compared to females at cadet level,

[61] Lise Bourgon, *The CF as an Employer of Choice: The Key for a Successful Gender Integration* (Kingston: Canadian Forces College, 2007); Department of National Defence (2016); 2006-2013 and 2015 data calculated from Department of National Defence (2006-13; 2015), dividing total force strength by releases. The dip between 1997 and 2004 may reflect that a different calculation method has been used.

and this risks skewing the overall figure. Nevertheless, this improvement in attrition rates is a positive initial sign. However, it must not be forgotten that there are myriad other, gendered variables unrelated to the combat exclusion that impact female retention rates. For example, NZDF studies have found that women tend to leave the services for "reasons including the tension of balancing family and career, lack of stability, and overloading due to personnel shortages".[62] Tanner also found that, in 1999, Canadian servicewomen left due to: a) a hostile attitudinal climate and the perception that the forces are an *old boys network* where it is *hard to belong*; b) feeling their work was not evaluated fairly; c) organizational processes such as lack of supervisor support; d) harassment; and, e) discrimination over maternity, gender, and family status.[63] Raising the combat exclusion cannot redress all of these problems, especially in the upper ranks.

[62] Ministry of Defence, *Maximising Opportunities for Military Women in the New Zealand Defence Force* (Wellington: Ministry of Defence, 2014), p. 20; see also Claire Burton, *Report of the Gender Integration Audit of the New Zealand Defence Force* (Wellington, N.Z.: Human Rights Commission, 1998).

[63] Tanner, "Gender Integration in the Canadian Forces."; see also Murray Brewster, "Female Sailors Leaving Warships Lack Support from Bosses, Study Suggests," *The Globe and Mail*, 31 July 2000.

Promotion

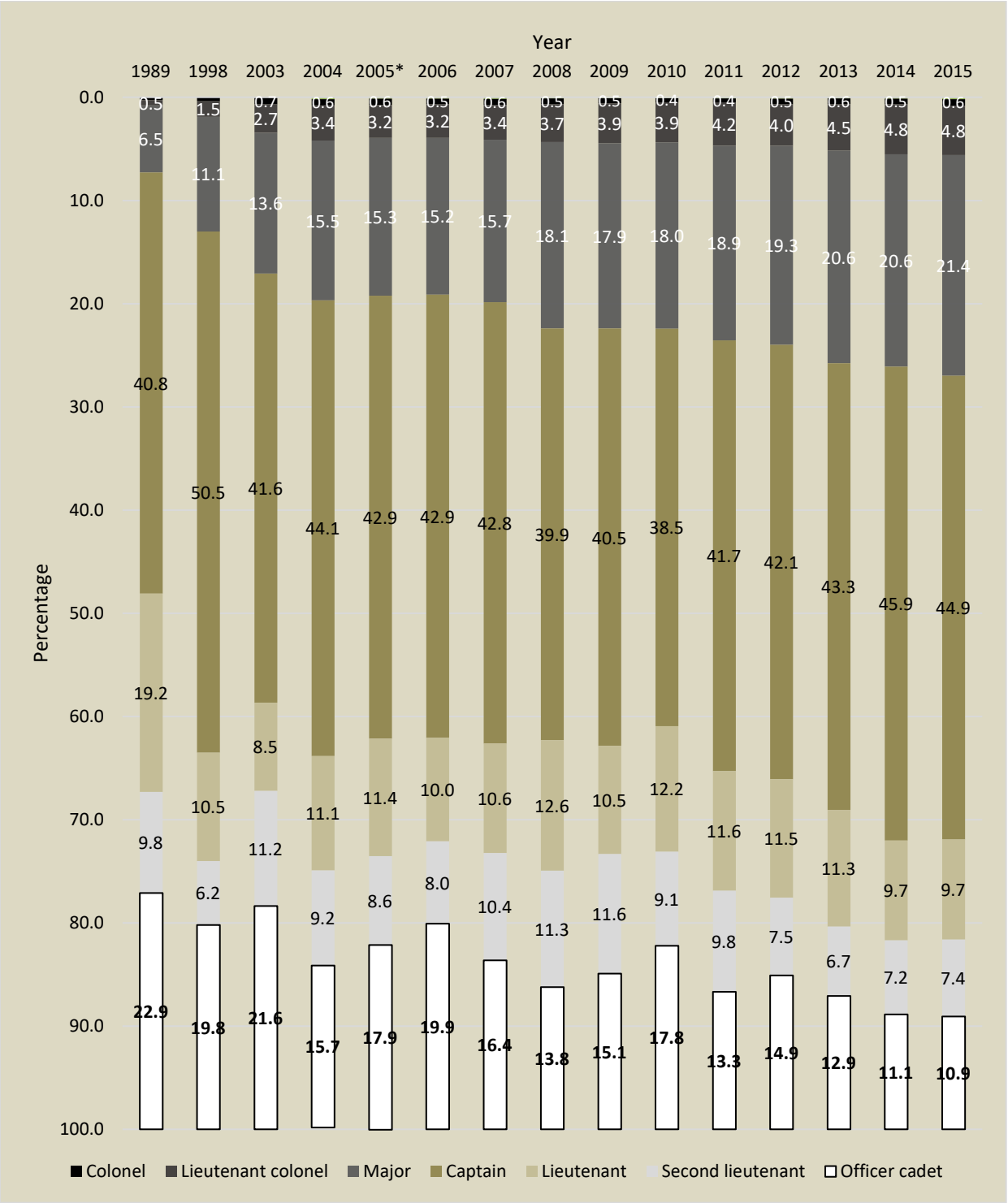


Figure 7: Female Regular Force officer rank distribution 1989-2015

Figure 7 captures the way women are distributed across the ranks, rather than the number/proportion of women at each rank. Although this latter data is part of our dataset, it falls outside the scope of this paper. Figure 7 shows that the majority of female officers in the Canadian regular force are middle-ranking, that is, captains. Ranks have re-distributed vertically across time - a loss of women in the lowest rank of officer cadet has been met with an attendant rise in the distribution of women in the middle rank of major. This is in line with the shift observed in all other parts of the services in the 90s, as lower ranks and non-operational groups were down-sized. However, women have still failed to break into the highest ranks. The most senior ranks of general, lieutenant general, major general, and brigadier general have been excluded from this graph. In the case of general and lieutenant general, this is because no woman has achieved any of these ranks. In the case of brigadier general and major general, although there have been up to three females at this rank in the forces since 2004, the data is too small to depict on this graph. To give a sense of scale, the 0.6 percent of women who, in 2015, were colonels, represents only 18 women, which is 5.5 percent of all colonels. Despite these positive developments into the middle ranks, there is little evidence showing a shattering of the brass ceiling that could be said to be tied to the raising of the ban.

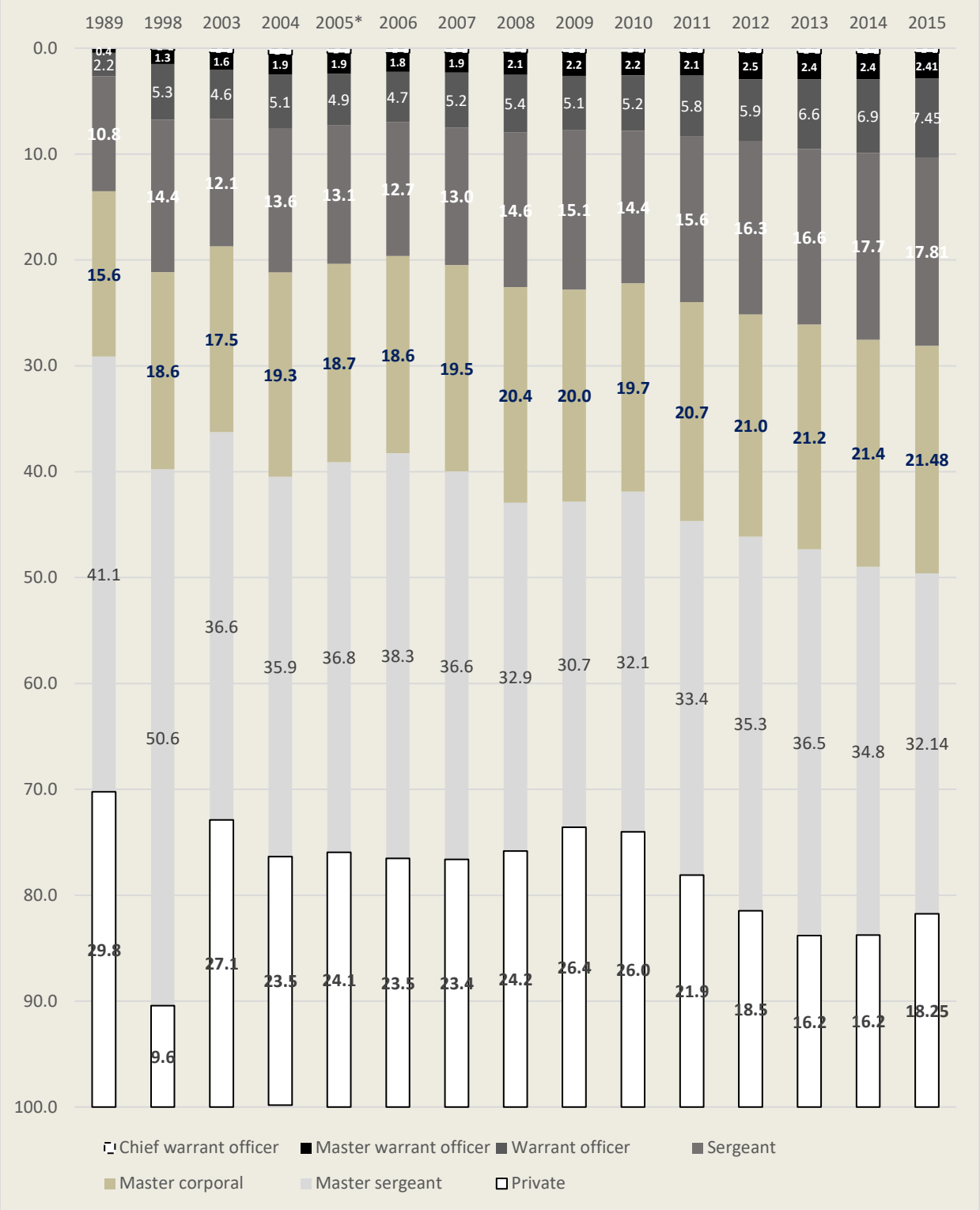


Figure 8: Regular force female NCM rank distribution 1989-2015[64]

[64] Sources (for Figures 7 and 8): 1989, 1998: Tanner (1999); 2005: NATO (2006); all others Department of

Figure 8 shows the shifts in the number of regular force female non-commissioned members by rank between 1989-2015. The greatest shift has occurred in the lower-middle ranks, with significant increases in the proportion of sergeants and master corporals, and a smaller increase in the number of warrant officers that nonetheless illustrates an upward trend. The vacillations in the lowest ranks (master sergeant and private) are due to downsizing that occurred in the forces. Force Reduction Programs (FRPs) were implemented for non-commissioned members from 1992-1996 and then officers from 1994 to 1996. This also resulted in a spike in attrition observed in these years (above). This said, women have still failed to break into the highest ranks. No rank has been omitted from this graph. However, the increases in numbers of chief warrant officers (CWO) and master warrant officers, as the chart shows, have been very small across a twenty-eight-year period. The 0.45 percent of women who were CWOs in 2015 represents 30 women, which is 5.5 percent of all CWOs.

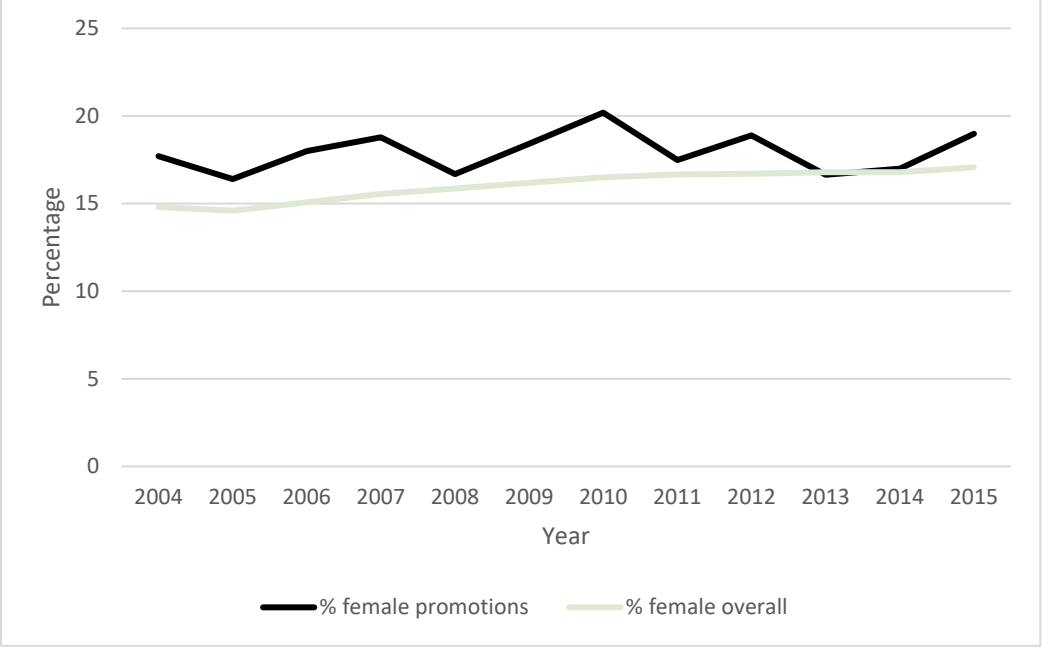


Figure 9: Proportion of women in regular force officer promotions 2004-2015

National Defence (2003-2015).

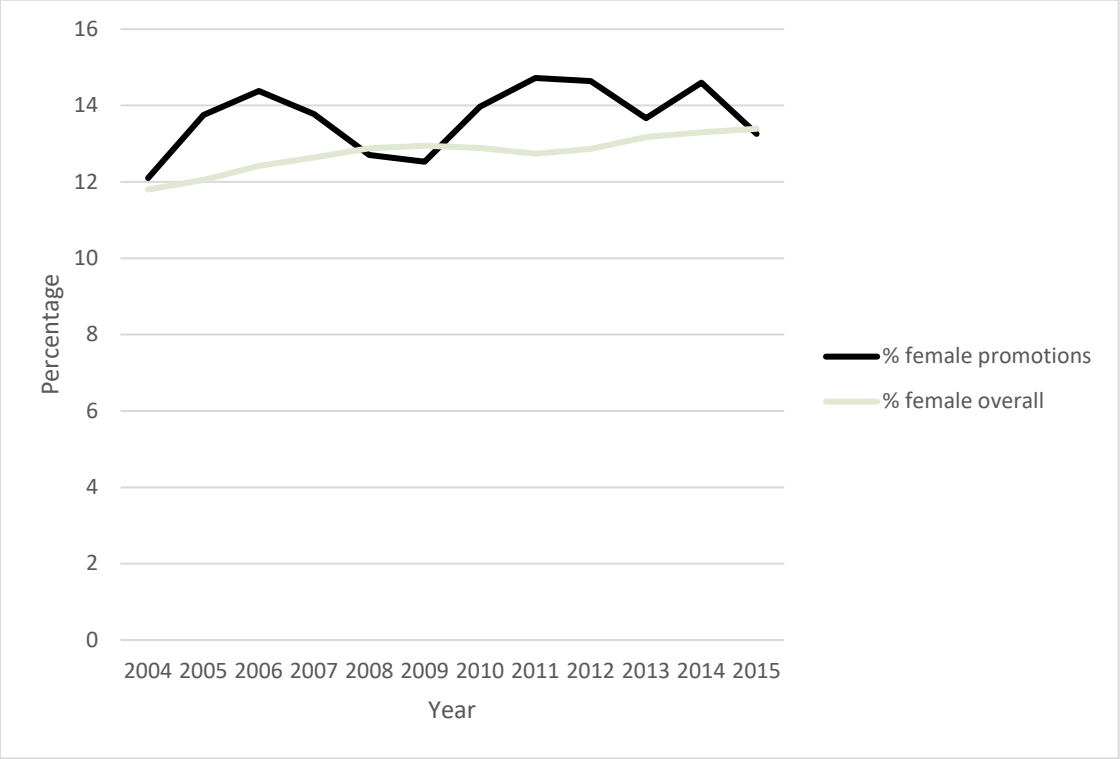


Figure 10: Proportion of women in regular force NCM promotions 2004-2015[65]

Figures 9 and 10 suggest that women are *over*-represented in officer promotions, as they consistently make up more than 17 percent of promotions (in black) despite making up 16 percent of the forces (in grey) before 2013 and in 2015. In 2013 and 2014, the female officer promotion rate equalized with the total percentage female rate. For NCMs, women were also over-represented in promotions, except in the years 2008, 2009 and 2015. In 2008, 2009 and 2015, the female promotion percentage fellow below the total percentage female rate. There are a few possible explanations for this trend, for example that the women that join and remain in the defence forces are a more self-selected and high-performing group than the men, or that women are over-represented in promotions from lower ranks into middle ranks. This finding represents an interesting future avenue of study.

[65] Department of National Defence (2003-2015), calculated.

Findings from New Zealand

Recruitment

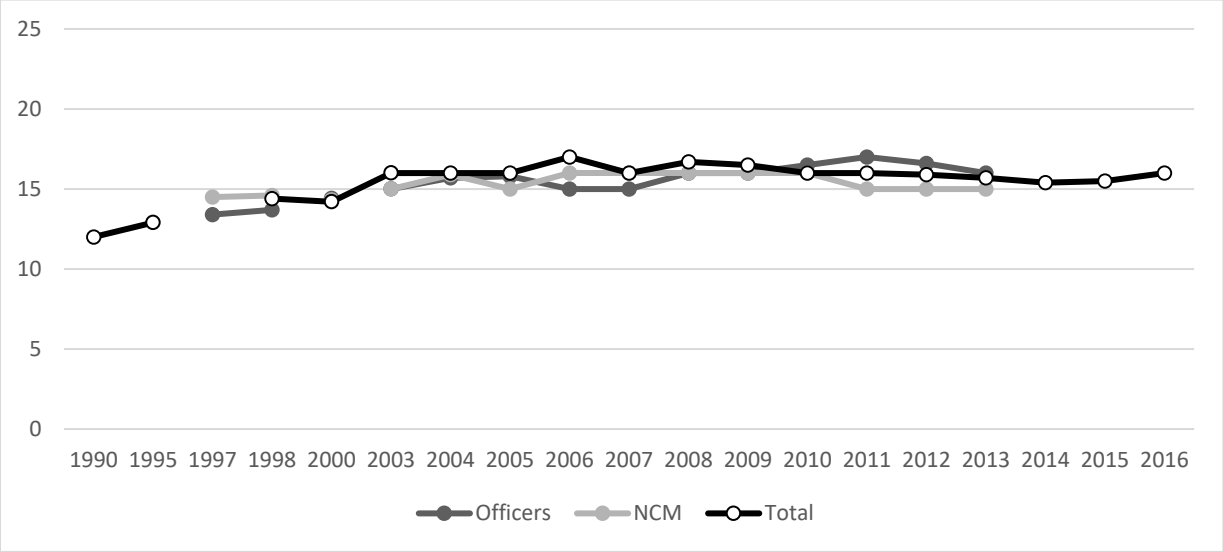


Figure 11: Regular force female percentage 1990-2015

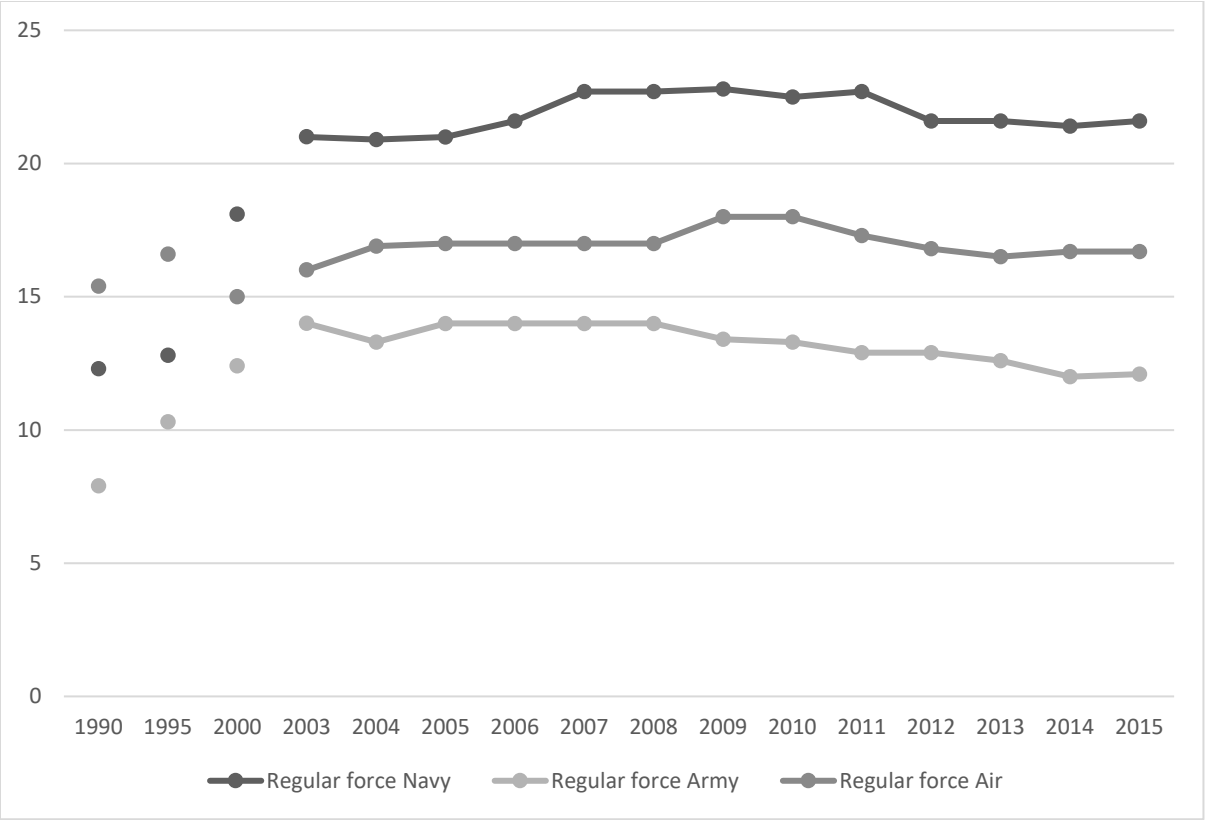


Figure 12: Regular force percentage female by service 1990-2015[66]

Figures 11 and 12 agree with the Canadian data in two ways. First, the NZDF's annualized growth rate averages at 0 for the past twelve years, suggesting it is highly unlikely to meet its goal of 25 percent regardless of time span. This, again, raises the question of why these goals are pegged at this 'critical mass' rate, when they are unachievable in the absence of more targeted recruitment measures, or wider reforms. Second, and as in Canada, the progress observed among female officers is slightly superior to that observed for female NCMs. Finally, this data provides one additional crucial insight, which is that, disaggregated by service, the Army has shown the least progress on attracting women. The Navy, meanwhile, comes close to this 25 percent threshold. With an annualized growth rate of 0.1 percent, however, growth has plateaued.

[66] Sources (for Figures 11 and 12): 1997, 2004: Burns and Hanson (2005, 88); all others Ministry of Defence (2014, 27, 54).

Retention

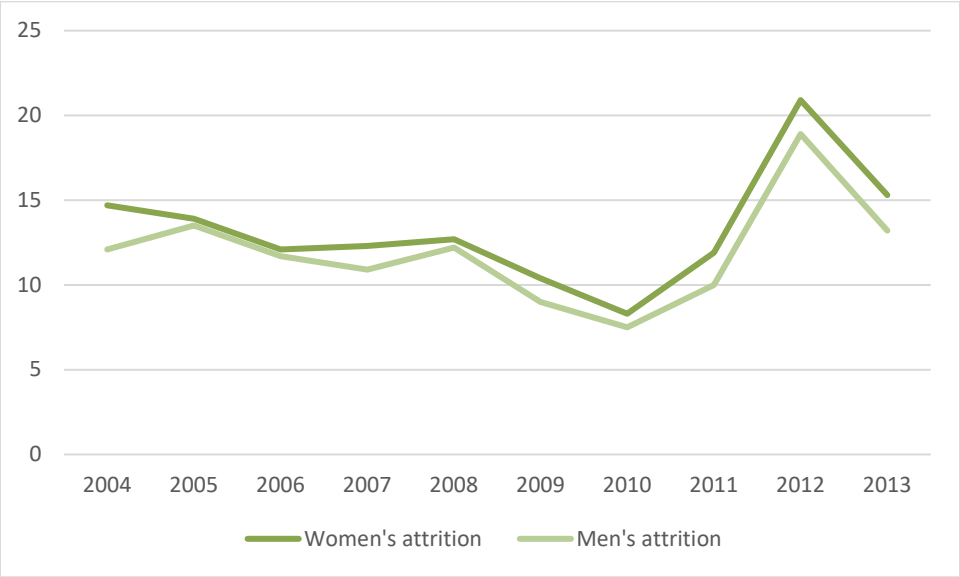


Figure 13: Attrition rates New Zealand regular force 2004-2013[67]

Figure 13's data is unfortunately limited in its coverage, reflecting low data availability. Nevertheless, one key idea that can be drawn from this chart is that there is a persistent gap between men's and women's attrition rates, which appears not to be narrowing. Regardless of cyclical fluctuations in all attrition – as of 2015, for example, attrition had fallen back to its 2010 rate – women's remains higher than men's.

[67] Source: Ministry of Defence(2014) , p. 20.

Promotion

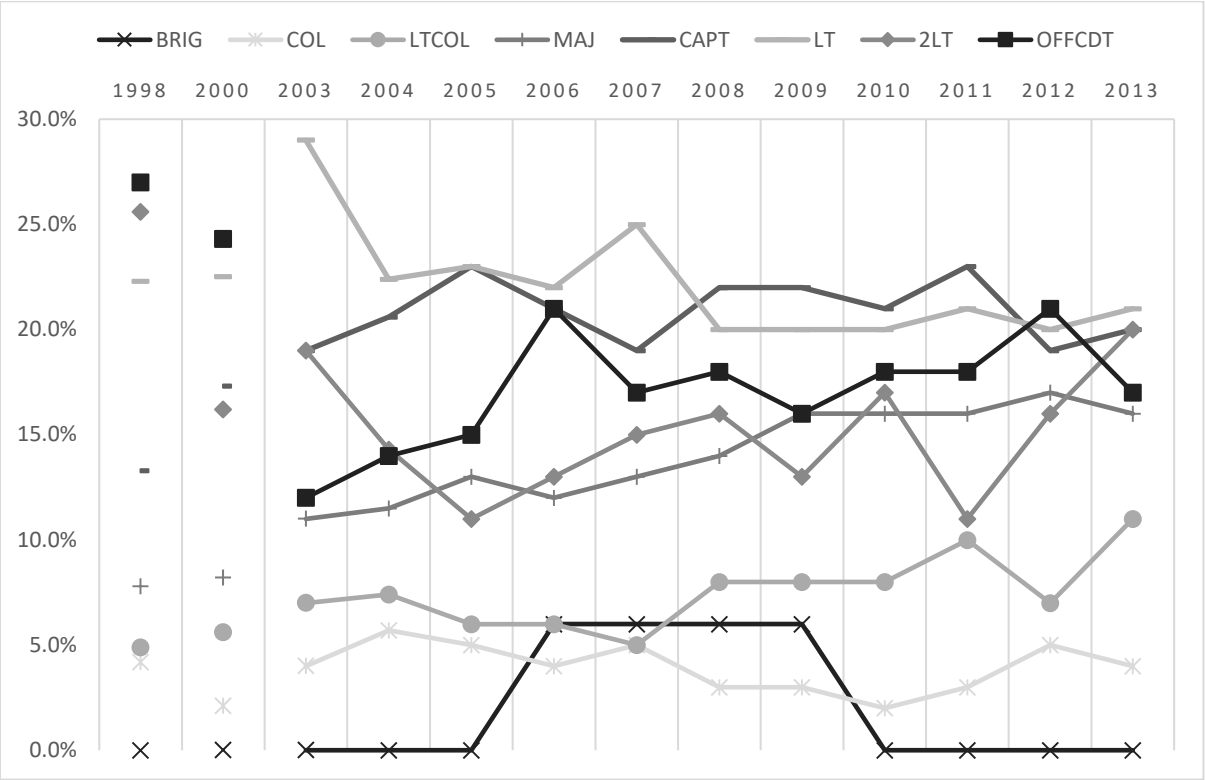


Figure 14: Percentage of female regular force officers by descending rank 1998-2013[68]

[68] Source: 2003-2013: Ministry of Defence 2014); 1998, 2000: Ministry of Defence (2005, 101). Between these two sources, there are discrepancies in the reported percentage of female officer cadets, which reflects the dip from 2000 to 2003. For example, the latter source reports the percentage of officer cadets in 2004 to be 23.5 percent. We have deemed the former source more accurate.

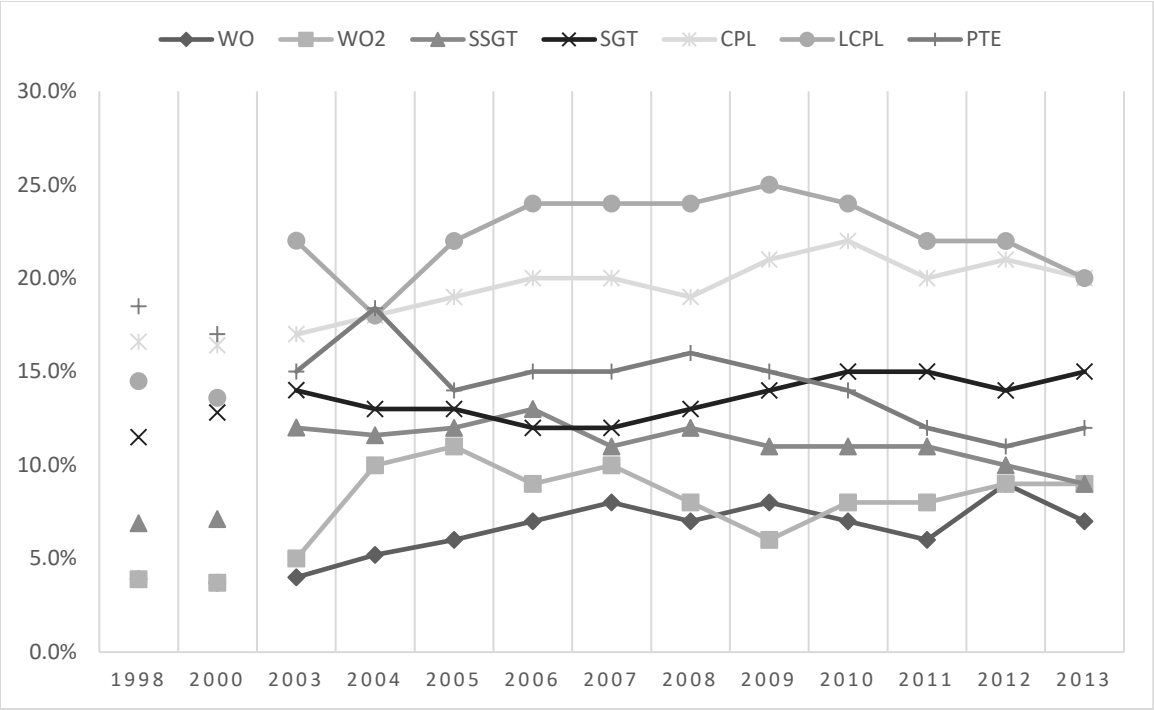


Figure 15: Percentage of female regular force NCMs by descending rank 1998-2013[69]

Figures 14 and 15 differ from the CAF data as they show the percentage of women as compared to men by rank, rather than the distribution of women across the ranks. As such, to indicate progress, movement on each of these measures upward would have to be observed. Note that in Figure 14, ranks not yet achieved by any woman (LTGEN and MAJGEN) have been excluded. Of the three targets set by the NZDF outlined above, the only one which is on track to be reached in the near future is for female sergeants, who, in 2013, comprised 15 percent of all sergeants. With an annualized growth rate of around 0.2 percent, this goal is still remote, however. Likewise, the annualized growth rate for lieutenant colonels is 0.5 percent, and 0.4 percent for both categories of warrant officer. The movements observed in these charts are not linear and are not trending upward. Instead, the representation of women in particularly middle and upper ranks tends rather to plateau, indicating a sustained 'brass ceiling' for women. For this reason, we would not predict that the goals that the

[69] Source: 2003-2013: Ministry of Defence (2014); 1998, 2000: Ministry of Defence (2005, p. 102).

NZDF has set for itself could be reached even in another two decades, as simply waiting for women to step through the open door may not be enough.

Analysis

Overall, this data paints a mixed picture which should dampen expectations around the impact of raising combat exclusions. Evidence is weakest that removing the combat exclusion has yielded higher recruitment rates. The most significant takeaway from the recruitment data for CAF is that women are still not selecting combat roles as their occupations. This may create flow-on problems for promotions, which, while occurring steadily into the middle ranks, has not translated into the upper ranks. Retention shows positive if not systematic progress. As we have suggested, however, these improvements may not have resulted from improved access to promotions via the lifting of the ban per se, but because of other, social effects that lifting a discriminatory bar such as this one has.

Overall, while the data indicates modest progress with regard to the recruitment and promotion of women, these advancements are limited when put in the context of the goals the forces have set, and re-set, for themselves. Neither NZDF nor CAF is on track to meet their goals, goals which appear to have been (explicitly or implicitly) informed by critical mass theory. Evidence for the causative power of the combat ban to improve these indicators is limited. Longitudinal data shows that no *acceleration* of improvements in recruitment occurred, as there is no noticeable spike after 1989 in CAF, and 1997 in the NZDF. The rate of growth sustained, while it is positive, is not large enough to meet these goals 5-6 years from now. This raises further concerns about the unreasonably high expectations placed on the lifting of the ban in the popular imagination. What is most significant to this paper is not measuring the size of the impact of the raising of the combat ban, therefore, but rather showing that the lifting of the ban may not have triggered the flow-on effects that policymakers have stated it should have.

From a critical mass theoretical perspective, one might dismiss these findings on the basis that the Forces are yet to reach the critical mass. However, such logic makes it impossible to study an institution that has not yet reached a critical mass, and may

never reach a critical mass. As we have argued, the changes required to improve gendered conditions must go beyond a simple policy like removing the combat exclusion. This is the case for all countries where policymaking is informed by mainstream ideas about the veracity of critical mass theory. This means that our findings are generalizable at least to Australia and the US, where we have also shown this type of thinking to dominate.

This critique adds to existing critiques of critical mass theory. First, in addition to poor empirical evidence supporting critical mass theory, its logic is that it is unreasonable to expect significant cultural change until a critical mass of women is first reached. Given how far many workplaces – including militaries – are far from this critical mass figure, the theory seems to offer an unsatisfying *just wait* solution for those seeking to address inequality in institutions. Second, critical mass theory often conflates achieving gender equality by adding women. Attention to structural sexism is replaced by claims that these elements of institutions will disappear once individual women are included. Thinking about feminism as an emancipatory movement, gender as a social construct, and the potential for institutional change are left largely out of the theory.[70]

We, therefore, argue against using liberal feminist rationales to guide improving gender equality in the military. Shifting away from critical mass theory would allow for the development of rigorous and specific policies that address military gender issues, rather than presuming that waiting for more women to enrol, enlist, seek promotion and remain within the organization will solve a number of complex problems. In short, it is inaccurate to assume that the removal of the combat exclusion barrier will automatically lead to more women, or that an increased number of women in the Forces will guarantee equality.

Conclusions

Given the high expectations placed on the combat exclusion, it is reasonable to presume that, decades after the policy change, it would be possible to observe evidence of the correlation that is often publicly imputed between the lifting of the ban and

[70] Catherine Rottenberg, *The Rise of Neoliberal Feminism* (New York: Oxford University Press, 2018), p. 419.

improved recruitment, retention, and promotion of women. Overall, our findings indicate that the removal of the combat exclusion did not have the expected impact on these indicators. While there are positive shifts over time in attrition and certain promotion measures into the middle ranks, these changes have been incremental rather than sweeping. Most significantly, the defence forces are not meeting their own targets. The belief that opening these roles would lead to increased women in the services and a corresponding beneficial institutional change is a fallacy. While the policy change may have been a positive step in recognizing the work that women were already doing in frontline roles, *opening the doors* itself is not a trigger for wide-ranging improvements for women.

Existing scholarly critiques of critical mass theory have already shown that the *politics of presence* is inherently limited. However, its logic appears to continue to inform policymakers. It is for this reason that we argue that the persistence of an implicit belief in critical mass theory precludes more realistic, and radical, policymaking that addresses a variety of factors that limit gender equality in the forces. Military institutions have been male-dominated and have historically privileged men and masculine traits. A *permanent reorientation* or *regendered* military may not be possible, and cannot be achieved through the removal of the combat exclusion alone. The logic of critical mass theory in relation to the combat exclusion not only places unrealistic expectations on a single policy change, but it also implies that significant institutional change should not be expected until a critical mass of women has joined the services. Given the slow rate of improvement on these measures, this extends the timeline for achieving equality indefinitely.

References

Allard, Tom. "Women, Your Armed Forces Need You." *Sydney Morning Herald*, 24 March 2008.

Asch, Beth J., John A. Romley, Mark E. Totten, and Mark Totten. *The Quality of Personnel in the Enlisted Ranks*. Santa Monica: RAND Corporation, 2005.

Beeby, Dean. "Men Only, Submariners Indicate." *The Globe and Mail*, 9 February 2000.

Bell, Cathie. "Report Highlights Sex Wars in Defence Force." *Dominion Post*, 6 November 1998.

Berthiaume, Lee. "Canadian Military Hopes to Cut Hiring Targets for Women, Minorities." *Ottawa Citizen*, 19 May 2014. http://www.ottawacitizen.com/life/Canadian+military+hopes+hiring+targets+women+minorities/9855180/story.html.

Blue, Jackie. "National Supports Equality in Defence Forces." *Scoop*, 7 December 2006. http://www.scoop.co.nz/stories/PA0612/S00168.htm?from-mobile=bottom-link-01.

Bourgon, Lise. "The CF as an Employer of Choice: The Key for a Successful Gender Integration." Kingston: Canadian Forces College, 2007.

Brewster, Murray. "Female Sailors Leaving Warships Lack Support from Bosses, Study Suggests." *The Globe and Mail*, 31 July 2000.

Broome, Lissa Lamkin, John M. Conley, and Kimberly D. Krawiec. "Does Critical Mass Matter? Views from the Boardroom." *Seattle University Law Review* 34, 4 (2011): pp. 1049–80.

Burns, Janice, and Margaret Hanson. "Review of Progress in Gender Integration in the New Zealand Defence Force." Wellington: New Zealand Defence Force, 2005.

Burton, Clare. "Women in the Australian Defence Force. Two Studies: The Cultural, Social and Institutional Barriers Impeding the Merit-Based Progression of Women and the Reasons Why More Women Are Not Making the Australian Defence Force a Long-Term Career." Canberra: Defence Centre, 1996.

———.*Report of the Gender Integration Audit of the New Zealand Defence Force*. Wellington, N.Z.: Human Rights Commission, 1998.

Canadian Human Rights Tribunal. "Tribunal Decision 3/89 Between: Isabelle Gauthier, Joseph G. Houlden, Marie-Claude Gauthier, Georgina Ann Brown (Complainants) And Canadian Armed Forces (Respondent)." Ottawa, 1989.

Carroll, Susan J., ed. *The Impact of Women in Public Office*. Bloomington: Indiana University Press, 2001.

Celis, Karen, Sarah Childs, Johanna Kantola, and Mona Lena Krook. "Rethinking Women's Substantive Representation." *Representation* 44, 2 (2008.): pp. 99–110.

Chandler, Jo, Simon Mann, and Paola Totaro. 2011. "What If It Were a Woman?" *The Age*, 14 April 2011.

Childs, Sarah, and Mona Lena Krook. "Should Feminists Give Up on Critical Mass? A Contingent Yes." *Politics Gender* 2, 4 (2006.): pp. 522–530.

Cockburn, Cynthia, and Meliha Hubic. "Gender and the Peacekeeping Military: A View from Bosnian Women's Organizations." In *The Postwar Moment: Militaries, Masculinities and International Peacekeeping*, edited by Cynthia Cockburn and Dubravka Zarkov, pp. 103–21. London: Lawrence & Wishart, 2002.

Cowen, Deborah. *Military Workfare: The Soldier and Social Citizenship in Canada*. Toronto: University of Toronto Press, 2008.

Creveld, Martin van. "The Great Illusion: Women in the Military." *Millennium*, June 2016.

Dahlerup, Drude. "From a Small to a Large Minority: Women in Scandinavian Politics." *Scandinavian Political Studies* 11, 4 (1988): pp. 275–298.

———."The Story of the Theory of Critical Mass." *Politics and Gender* 2, 4 (2006): pp. 511–22.

Davis, Karen D. "Organizational Environment and Turnover: Understanding Women's Exit from the Canadian Forces." *Unpublished Masters Thesis,* 1994. http://digitool.library.mcgill.ca/R/?func=dbin-jump-full&object_id=26258&local_base=GEN01-MCG02.

Dempsey, Martin. "Women in Combat Pentagon Press Conference." 24 January 2013. https://americanrhetoric.com/speeches/leonpanettamartindempseywomenincombatpentagon.htm.

Department of National Defence. "Women in the Canadian Armed Forces," 18 March 2016.

http://www.forces.gc.ca/en/news/article.page?doc=women-in-the-canadian-armed-forces/ildcias0.

———.(12 reports). "Canadian Armed Forces Employment Equity Report."

Ottawa, 2003-2015.

———. "Military HR Strategy 2020: Facing the People Challenges of the Future." Ottawa: Canadian Communication Group, 2002.

———.Directorate of History, File 78/517,1988.; Robinson.

Dharmapuri, Sahana. "Just Add Women and Stir?" *Parameters* 41, 1 (2011): pp. 56–70.

Duncanson, Claire. "Anti-Militarist Feminist Approaches to Researching Gender and the Military." In *The Palgrave International Handbook of Gender and the Military*, edited by Rachel Woodward and Claire Duncanson, pp. 39–58. London: Palgrave, 2017.

Duncanson, Claire, and Rachel Woodward. "Regendering the Military: Theorizing Women's Military Participation." *Security Dialogue* 47, 1 (2016): pp. 3–21.

Eichler, Leah. "Three Events in the Past Week Reflect a Cultural Shift in Perceptions about Women in Leadership Roles." *The Globe and Mail*, 1 February 2013.

Enloe, Cynthia. *Maneuvers: The International Politics of Militarizing Women's Lives*. Berkeley: University of California Press, 2000.

Estrela, Jason. "Machine-Learning Analysis of Female Voluntary Attrition in the Canadian Armed Forces." Master of Defence Studies, Joint Command and Staff Programme: Canadian Forces College, 2018. https://www.cfc.forces.gc.ca/303/171/171-

eng.html?keywords=2&start=0&search_where=program&yearLimit=2018&submit=Search.

Feinman, Ilene. *Citizenship Rites: Feminist Soldiers and Feminist Antimilitarists*. New York: NYU Press, 2000.

Fox, Michael. "'One in 10' Female Soldiers Harassed." *The Press*, 14 February 2014.

Greene, Gervase. "Crisis Among Defence Force Women Denied." *The Age*, 21 January 1999.

Grey, Sandra. "Numbers and Beyond: The Relevance of Critical Mass in Gender Research." *Politics & Gender* 2, (2006): pp. 492–502.

Grigson, Paul. "Let Women Get Nearer the Battle, Says Forces Chief." *Sydney Morning Herald*, 9 February 1990.

Holden Nicola. "Canadian Forces 2001 Self-Identification Census: Methodology and Preliminary Results," Department of National Defence Canada, Ottawa, 2003.

Kanter, Rosabeth Moss. *Men and Women of the Corporation*. London: Basic Books, 1977.

Kennedy-Pipe, Caroline. "Liberal Feminists, Militaries and War." In *The Palgrave International Handbook of Gender and the Military*, edited by Rachel Woodward and Claire Duncanson, pp. 23–38. London: Palgrave, 2017.

Kier, Elizabeth. "Homosexuals in the U.S. Military: Open Integration and Combat Effectiveness." *International Security* 23, (1998): pp. 5–39.

Kier, Elizabeth, Tarak Barkawi, Christopher Dandeker, and Melissa Wells-Petry. "Rights and Fights: Sexual Orientation and Military Effectiveness." *International Security* 24, (1999): pp. 181–201.

King, Anthony. "The Female Combat Soldier." *European Journal of International Relations* 22, 1 (2016): pp. 122–43.

Lovenduski, Joni, and Pippa Norris. "Westminster Women: The Politics of Presence." *Political Studies* 51, 1 (2003): pp. 84–102.

MacKenzie, Megan. *Beyond the Band of Brothers: The US Military and the Myth That Women Can't Fight*. Cambridge: Cambridge University Press, 2015.

Mansbridge, Jane. "Quota Problems: Combating the Dangers of Essentialism." *Politics and Gender* 1, 4 (2005): pp. 622–38.

Mesok, Elizabeth. "Sexual Violence and the US Military: Feminism, US Empire, and the Failure of Liberal Equality." *Feminist Studies* 42, 1 (2016): pp. 41–69.

Ministry of Defence. "Maximising Opportunities for Military Women in the New Zealand Defence Force." Wellington: Ministry of Defence, 2014.

Moore, Brenda L. "From Underrepresentation to Overrepresentation: African American Women." In *It's Our Military Too!: Women and the US Military*, edited by Judith Stiehm, 115–35. Philadelphia: Temple University Press, 1989.

———. "A Time to Reassess: The Intersection of Race and Class." *Critical Studies on Security* 1 (2013): pp. 246–48.

NATO. "Canadian Forces National Report to the Committee for Women in NATO Forces," NATO, 2006. Available at: http://www.nato.int/ims/2006/win/pdf/canada_national_report_2006.pdf

New Zealand Defence Force. "Defence Estate Regeneration 2016-2030." Wellington: New Zealand Defence Force, 2016. http://www.nzdf.mil.nz/downloads/pdf/public-docs/2016/Defence-Estate-Regeneration-2016-2030.pdf.

Nicholson, Brendan. "ADF 'in Need of New Faces.'" *The Australian*, 3 March 2015.

Oakes, Dan. "Women Can Fight Way to Top." *The Sydney Morning Herald*, 27 September 2011. https://www.smh.com.au/national/women-can-fight-way-to-top-20110927-1kvim.html.

———."Women in Line for Top Brass." *Sydney Morning Herald*, 28 September 2011.

Park, Jungwee. "A profile of the Canadian Forces," Statistics Canada, no. 75-001-X, 2008.

http://www.statcan.gc.ca/pub/75-001-x/2008107/pdf/10657-eng.pdf.

Percy, Sarah. "What Makes a Norm Robust: The Norm Against Female Combat." *Journal of Global Security Studies* 4, 1 (2019): pp. 123–38.

Reiffenstein, Major Anne. "Gender Integration: An Asymmetric Environment," in

Women and Leadership in the Canadian Forces: Perspectives and Experience, pp. 1-10, edited by Karen Davis. Winnipeg: Canadian Defence Academy Press, 2007.

Rosenberg, Matthew, and Dave Philipps. "All Combat Roles Now Open to Women, Defense Secretary Says." *The New York Times*, 3 December 2015. https://www.nytimes.com/2015/12/04/us/politics/combat-military-women-ash-carter.html.

Rottenberg, Catherine. *The Rise of Neoliberal Feminism*. New York: Oxford University Press, 2018.

Sallot, Jeff. "Annie Get Your Gun, Combat's Calling You." *The Globe and Mail*, 19 December 1997.

Sawer, Marian. "What Makes the Substantive Representation of Women Possible in a Westminster Parliament? The Story of RU486 in Australia." *International Political Science Review* 33, 3 (2012): pp. 320–35.

Schaefer, Agnes Gereben, Jennie W. Wenger, Jennifer Kavanagh, Jonathan P. Wong, Gillian S. Oak, Thomas E. Trail, and Todd Nichols. "Implications of Integrating Women into the Marine Corps Infantry." Santa Monica: Rand Corporation, 2015.

Simons, Anna. "Women in Combat Units: It's Still a Bad Idea." Naval Postgraduate School Monterey CA, 2001. https://apps.dtic.mil/docs/citations/ADA485306.

Simpson, Suzanne, Doris Toole and Cindy Player. "Women in the Canadian Forces: Past, Present and Future" Atlantis. 4, II (1979): pp. 226-283.

Soeters, Joseph L., and Jan Van Der Meulen, eds. *Cultural Diversity in the Armed Forces.* London: Routledge, 2007.

Statistics Canada. "Canadian Armed Forces Regular Force and Primary Reserve Members Who Witnessed or Experienced or Personally Experienced Sexualized or Discriminatory Behaviour, or Who Were Sexually Assaulted, 2016 and 2018," 22 May 2019. https://www150.statcan.gc.ca/n1/daily-quotidien/190522/cg-a002-eng.htm.

Stiehm, Judith. *Arms And The Enlisted Woman*. Philadelphia: Temple University Press, 1989.

Summers, Anne. "Give Women A Fighting Chance." *Sydney Morning Herald*, 14 January 1999.

Sydney Morning Herald. "Keeping Women in Uniform." *Sydney Morning Herald*, 23 November 2009.

Tanner, Leesa. "Gender Integration in the Canadian Forces - a Quantitative and Qualitative Analysis." Department of National Defence: Ottawa, 1999.

———."Female Participation in the Regular Force of the Canadian Forces (1989-1997)." Department of National Defence: Ottawa, 1997.

———."A Synopsis of Female Participation in the Regular force of the Canadian Forces." Department of National Defence: Ottawa, 1996.

The Globe and Mail. "Women Do Poorly in Battle Training." *The Globe and Mail*, 26 June 1995.

Thomas, Keith, and Steve Bell. "Competing for the Best and the Brightest: Recruiting and Retention in the Australian Defence Force." *Security Challenges* 3, 1 (2007): pp. 97–118.

Towns, Ann. "Understanding the Effects of Larger Ratios of Women in National Legislatures." *Women & Politics* 25, 1-2 (2003): pp. 1–29.