



# Experts, activists, and girl bosses of the nuclear apocalypse: feminisms in security discourse

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Received: 18 May 2022 / Revised: 1 March 2023 / Accepted: 10 March 2023 / Published online: 12 May 2023

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**Abstract** Having long been regarded as irrelevant to the high politics of foreign affairs, feminism and gender equality have in recent years gained increased attention in international security debates, including discussions about nuclear weapons policy. Several governments have adopted official feminist foreign policy postures, international security institutions have launched inquiries into gender equity and representation, and a myriad of security actors have enthusiastically embraced the language of women’s empowerment. Mapping the various modes of purported feminist practice on display in the nuclear policy field, we find that being “pro women” has become a sought-after rhetorical asset on both sides of the nuclear weapons debate. Reflecting wider trends in the corporate world, constituents of the nuclear weapons industry have increasingly embraced liberal feminist language and workplace diversity goals. These practices, we suggest, have helped challenge the perception of the nuclear industry as overly masculine, aiding recruitment to, and overall political legitimization of, the nuclear weapons enterprise. This development is significant because it functions to undercut the association between feminism and opposition to nuclear weapons, thus complicating efforts to advance arms control and disarmament through feminist interventions.

**Keywords** Feminism · Disarmament · Nuclear weapons · Public relations · Purple-washing · Legitimacy seeking

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## Expertinnen, Aktivistinnen und *Girl Bosses* der nuklearen Apokalypse: Feminismen im Sicherheitsdiskurs

**Zusammenfassung** Nachdem Feminismus und Geschlechtergleichstellung lange Zeit als irrelevant für die hohe Politik der Außenpolitik angesehen wurden, haben sie in den letzten Jahren in internationalen Sicherheitsdebatten, einschließlich Diskussionen über Atomwaffenpolitik, an Aufmerksamkeit gewonnen. Mehrere Regierungen haben offiziell eine Feministische Außenpolitik angenommen, internationale Sicherheitsinstitutionen haben Untersuchungen zur Gleichstellung und Repräsentation der Geschlechter eingeleitet, und eine Vielzahl von Sicherheitsakteuren hat sich enthusiastisch die Sprache des *Empowerment* von Frauen zu eigen gemacht. Durch ein *Mapping* der Darstellung der verschiedenen Formen angeblich feministischer Praxis im Bereich der Nuklearpolitik stellen wir fest, dass „Frauenfreundlichkeit“ auf beiden Seiten der Nuklearwaffendebatte zu einem begehrten rhetorischen Mittel geworden ist. In Anlehnung an umfassendere Trends in der Unternehmenswelt haben sich die Vertreter der Atomwaffenindustrie zunehmend eine liberale feministische Sprache zu eigen gemacht und sich Ziele der Vielfalt am Arbeitsplatz gesetzt. Wir schlagen die Annahme vor, dass diese Praktiken dazu beigetragen haben die Wahrnehmung der Nuklearindustrie als übermäßig männlich in Frage zu stellen, was die Rekrutierung und die allgemeine politische Legitimierung von Nuklearwaffenunternehmen gefördert hat. Diese Entwicklung ist von Bedeutung, da sie dazu beiträgt, die Verbindung zwischen Feminismus und Atomwaffengegnerschaft zu untergraben, was die Bemühungen um die Förderung von Rüstungskontrolle und Abrüstung durch feministische Interventionen erschwert.

**Schlüsselwörter** Feminismus · Abrüstung · Atomwaffen · Öffentlichkeitsarbeit · Legitimierung

*It's all about #girlpower! (BAE Systems 2013)*

### 1 Introduction

Where are the women? This question, Cynthia Enloe suggests, should be the starting point for feminist analysis in IR (Enloe 2014, pp. 1, 6). So, where are the women in the field of nuclear policymaking? Pretty much everywhere, actually. Looking at the state of affairs in the US nuclear weapons establishment in early 2022, the Department of Energy and National Nuclear Security Administration (NNSA) were both led by women. So were three of the five big US arms contractors and several influential think tanks. The US ambassadors to the International Atomic Energy Agency (IAEA), the Conference on Disarmament, and the United Nations were also all women, as were the Director of National Intelligence, the advisor responsible for nuclear arms control at the White House National Security Council, the Under Secretary for Arms Control at the US State Department, and two of the three bureau chiefs reporting to her. The US Deputy Secretary of Defense, specifically charged with leading the United States' nuclear weapons modernisation programme

(McLeary 2021), was also a woman. Finally, in November 2021, while President Joe Biden underwent a medical procedure, Vice President Kamala Harris became the first ever woman—and a woman of colour at that—to assume sole authority over the US nuclear arsenal. While gendered norms and expectations continue to shape the field of nuclear policymaking in important ways (Hurlburt et al. 2019), women are very much present in the corridors of thermonuclear power.

Since its emergence in the 1980s, the research programme on gender and nuclear weapons has centred on feminist disarmament advocacy, the marginalisation of women in the nuclear establishment, and the gendered, “technostrategic” language of control used by nuclear war planners (Cohn 1987; Mehan and Wills 1988; Taylor 1993; Sylvester 1998; Laware 2004; Duncanson and Eschle 2008; Eschle 2013; Feigenbaum 2015; Borrie et al. 2016; Burkett 2016; Hurlburt et al. 2019; Dalaqua et al. 2019; Minor 2020; Acheson 2021). Yet, as the paragraph above indicates, things appear to be changing. While key nuclear discourses remain gendered and largely masculine-coded, many of the actors and organisations involved in the development and deployment of nuclear weapons have adopted the goals of female empowerment and gender equality. For example, the intercontinental ballistic missile (ICBM) wing of the US Air Force has for several years visibly celebrated international women’s day. US nuclear defence contractors Lockheed Martin and Raytheon have both struck partnerships with the Girl Scouts of America to help girls build careers in Science, Technology, Engineering, and Math (STEM). At Los Alamos, the largest of the three national laboratories responsible for the development and maintenance of the United States’ nuclear warheads, the employee resource group “Atomic Women” organises a running series of events on topics ranging from “Diversity inclusion efforts” to “Pronouns 101” (Los Alamos National Laboratory 2022). While there were attempts in the past to highlight that women can also benefit from the nuclear age (Forgan 2003), they now speak from positions of power. When then US ambassador to the UN, Nikki Haley, laid out the US government’s case against what would become the Treaty on the Prohibition of Nuclear Weapons (TPNW) at a press conference in March 2017, she explicitly assumed the position of “a mother and a daughter” (Mortimer 2017). The ability to speak to and for women has become contested terrain in the struggles over legitimacy in the global nuclear order (see Considine 2019; Egeland 2022).

In this article, we survey the increasingly complicated nexus of feminism and nuclear weapons politics, identifying and deciphering the gendered practices and discourses of those eager to advance nuclear disarmament as well as those involved in the nuclear weapons enterprise. We contrast critical, independent feminist practices with liberal, corporate feminist practices, demonstrating that strategies that have historically been used by the former are increasingly appropriated by the latter. By juxtaposing critical and corporate feminism, we argue that the associations and objectives of gender equality are increasingly contested: the very same ideas are increasingly leveraged for goals that are diametrically different and fundamentally irreconcilable. The comparison also enables a historicised understanding of the use of feminist approaches and symbols, allowing us to document how symbols of radical causes are diluted when they are reworked in neoliberal contexts.

In so doing, we document the role of liberal feminist practices in efforts to enhance diversity within existing security institutions, to assist recruitment to the nuclear weapons enterprise, and, more broadly, to legitimise existing nuclear weapons complexes. We demonstrate that actors in the nuclear weapons industry have sought to transform their (increasingly politically damaging) machismo image by appropriating the language, aesthetics, and ideas of liberal feminism, thus future-proofing the enterprise. The performance of liberal feminism by actors in the nuclear weapons industry, we argue, can function to silence or counter the history of critical and anti-war feminist activism, loosening the association between masculinity and nuclearism (see Choi and Eschle 2022; Taha 2022; Rosengren 2022). While many gender and equality initiatives discussed in this article may be well-intentioned, their effects on the traditional anti-war feminist agenda are often less clear, and like other women-centred agendas (see Haastrup and Hagen 2021), they can still reify global hierarchies.

Seeking to map out the gamut of feminisms now on display in the nuclear weapons policy space, we investigate four modes of purported feminist practice: (i) feminist rhetoric, (ii) feminist sponsorship programmes, (iii) women's mentoring, and (iv) events and organising. We focus primarily on the United States, which remains the world's most powerful state and, arguably, ahead of other nuclear-armed states with respect to the salience of concern with workplace diversity and women's empowerment. Capturing the variety and often contradictory functions of feminist practice in the politics of nuclear (dis)armament is crucial to understanding not only the way in which power structures are contested but also how they adapt to, and persist in the context of, changing norms and expectations. We conclude that although increased representation of women and minorities can and does matter, feminism and intersectionality cannot be divorced from power structures. Indeed, it could be argued that the nuclear weapons industry, despite its efforts to enhance diversity, continues to uphold and reinforce gendered legacies of colonialism and racialized hierarchies (see Choi and Eschle 2022).

The remainder of this article is divided into three main parts. In the first part, we outline the article's conceptual framework and briefly review the existing literature on gender and nuclear weapons. In the second, we map out the various modes of purported feminist practice in the field of nuclear policy. In the third, we reflect on the social functions of the various feminisms promoted by actors in the nuclear policy space.

## 2 Conceptual framework

This study examines the “competent performance” of feminist language and aesthetics in the nuclear policy space (see Adler and Pouliot 2011). Specifically, we are interested in the variety and functions of social practices that can be grouped under the broader heading or “anchoring practice” of feminism. As understood here, an anchoring practice is a broad, fundamental practice or ideology that organises and makes other practices meaningful. For example, as Ann Swidler (2001, p. 90) explains, the anchoring practice of capitalism makes possible the practice of buy-

ing and owning property with money obtained through wage labour. Similarly, the anchoring practice of feminism renders meaningful the range of behaviours investigated in this paper, including feminist disarmament advocacy, mentoring of women in the nuclear policy space, and the deployment of girl-power rhetoric by nuclear arms contractors. Accordingly, a key conceptual building block informing this article is practice theory and the notion that important insights about international affairs can be gained through investigating what policy stakeholders do to advance their interests on a day-to-day basis (Adler and Pouliot 2011, p. 3).

While “feminism” is generally seen as referring to gender emancipation and women’s rights or empowerment, there are important differences between “liberal” and “critical” strands of feminism regarding the question of how this emancipation might be achieved. While the former emphasises women’s integration and participation within existing orders, the latter suggests that integration often “reifies masculine models of citizenship and political processes” (Sjoberg and Tickner 2011, p. 6; see also Sylvester 1998, p. 48). Critical feminists are thus usually less interested in gender balance than in the values, discourses and outcomes produced by political systems. In IR, feminism is typically understood to describe a worldview that privileges human over national security and that rejects militarism and “the possibility of separating moral command from political action” (Tickner 1988, p. 438. On anti-war feminism, see Cohn and Ruddick 2004). On this basis, some have suggested that any complicity in preparedness to use nuclear weapons is inconsistent with a meaningfully feminist approach to politics (Conway 2019; Pallapothu 2020). For Beatrice Fihn (2018), the executive director of the International Campaign to Abolish Nuclear Weapons (ICAN), nuclear arms are the “beating heart” of enduring colonial and patriarchal structures. For Lola Olufemi (2020), feminist work is justice work; feminism is about much more than simply gender representation, as it must entail tackling all systems of violence, including capitalism and militarism (Olufemi 2020, p. 3). In this critical perspective, many of the liberal feminist practices discussed in this article, such as the promotion of gender diversity within organisations that produce nuclear arms, hardly deserve the name of feminism.

However, with a view to shining a light on the wide variety of feminisms now visible in the nuclear policy space, in this article, we spotlight all behaviours ostensibly geared towards gender equality or the empowerment of women. We do so even if in some cases the feminism on display might be understood as superficial or insincere. As Cynthia Enloe (2014, p. 355) argues, “When asking ‘Where are the women?’—and following up with ‘How did they get there?’ ‘Who benefits from their being there?’ and ‘What do they themselves think about being there?’—one should be prepared for complex answers.” In broadening the analysis, we aim to highlight the political uses, and compatibility with nuclearism and militarism, of different versions of feminism. The insights we gain pertain to how the nuclear industry legitimises itself and how “gender talk” is being used strategically on both sides of the debate.

Recent years have seen a surge of interest in the gender balance in international security institutions, in particular multilateral arms control forums such as the Nuclear Non-Proliferation Treaty (NPT) review cycle (Borrie et al. 2016; Hurlburt et al. 2019; Dalaqua et al. 2019; Minor 2020). Overall, the latest numbers suggest that,

despite steps towards numerical equality, men continue to outnumber women in virtually all diplomatic forums dealing with international security and arms control. Much of this work has been premised on the idea that increased participation by women is not only a moral goal in and of itself but that increased diversity could aid the cause of disarmament or improve institutional performance; that women are “resources” in policymaking processes (Brown and Considine 2022). A landmark document in the field of feminist foreign policy, UN Security Council Resolution 1325, stresses “the importance of [women’s] equal participation and full involvement in all efforts for the maintenance and promotion of peace and security” (United Nations 2000). It has been highlighted that, all else equal, heterogeneous groups have been shown to reliably outperform more homogeneous groups in problem-solving exercises (see, e.g., Page 2007). On this basis, it has been argued that the “underrepresentation of women in multilateral forums dealing with nuclear weapons, especially at senior levels, should be of concern to all because this can inhibit the range of perspectives brought to bear on collective problems like nuclear disarmament” (Borrie et al. 2016, p. 28. See Brown and Considine 2022, p. 1259). A more diverse nuclear policy field, some maintain, would have the potential to unlock “novel, progressive and innovative solutions to intransigent challenges” (Cruz et al. 2021, p. 24).

The assumption underpinning the argument that increased diversity could aid the cause of disarmament is that cooperation is currently held back not by irreconcilable political interests but an absence of clever diplomatic solutions. Nuclear diplomacy, in this view, can be understood as a grand problem-solving exercise in which all involved are committed, broadly speaking, to the same goal, namely global nuclear disarmament. The alternative view, which arguably finds more empirical support, is that multilateral nuclear disarmament is held back not by an absence of technical fixes or good ideas but the simple truth that the security establishments of the current nuclear-armed states have no interest in disarming (Egeland 2021; Pelopidas and Verschuren 2023). If this is the case, the gender balance at NPT review conferences and similar gatherings is unlikely to change diplomatic outcomes (see Brown and Considine 2022). After all, the diplomats involved in the relevant discussions are not independent agents but representatives of governments with relatively fixed positions. In more general terms, some feminists have argued that merely “adding women” to existing institutions is unlikely to have much if any impact on outcomes (Ellerby 2017; Olufemi 2020; Berry and Lake 2021).

While critical feminists have sought to disrupt or dismantle the power hierarchies created by men, liberal strands of feminism, including so-called “girl boss” feminism (Amoruso 2014), invites career women to outdo men at their own game. The increasing resonance of the broader feminist agenda, as well as an undeniable, gradual shift in gender stereotypes and public opinion (Eagly et al. 2020; Minkin 2020; Huddy et al. 2000), has encouraged brands to sell products through appeals to female empowerment, a marketing strategy known as femvertising. Relatedly, the largely interchangeable concepts of “purple-washing”, “gender-washing”, and “feminist-washing” have been developed to make sense of the deployment by political or corporate actors of superficially feminist messages to legitimise or offset controversial behaviours in other areas (see, e.g., Gisbert and Rius-Ulldemolins 2019).

Scholarship suggests that, while work for gender equality in world politics is not hopeless and can yield important benefits, liberal gender mainstreaming policies regularly fail (Kreft 2017), often neglect the role of men and masculinities (Wright, Hurley, and Ruiz 2019), and frequently rely on cliché essentialist assumptions, for example about women as innately pro peace or humanitarianism (see Schramm and Stark 2020; Schwartz and Blair 2020).

### 3 Mapping feminist practices in the nuclear policy domain

Those involved in the nuclear weapons debate routinely make implicit or explicit arguments involving feminism, women, girls, and intersectionality. We identify four modes of feminist practice: feminist rhetoric, sponsorship programmes, mentorship arrangements, and events and organising. We demonstrate that each of these practices are enacted by actors on opposite ends of the nuclear policy debate, that is, by both actors pushing for disarmament and actors profiting from the continued production of nuclear arms. While anti-war activists have long engaged in disarmament activism informed by feminist ideas, actors in the nuclear weapons industry have increasingly appropriated and tried to re-define certain aspects of feminist practices for status quo-oriented ends. The remainder of this section goes through each of the four modes of practice in turn.

#### 3.1 Feminist rhetoric and aesthetics

A first mode of feminist practice in the nuclear policy field is the deployment of rhetoric that implicitly or explicitly mobilises female empowerment, gender equality, or critiques of masculinity in debates or communication about nuclear weapons. Use of feminist rhetoric in support of nuclear disarmament and arms control goes back several decades. Such rhetoric was central, for example, to the successful campaign against Swedish nuclear armament in the early Cold War period (Rosengren 2020, p. 92). Whereas companies, governments, and laboratories largely limit their feminism to the realm of representation and diversity in the workplace (see below), proponents of disarmament frequently make arguments also about the nature of nuclear weapons and their consequences. Anti-war feminists have argued that reliance on indiscriminate weapons undercuts the feminist vision of human security and steals resources away from necessary investments in human health and environmental protection (Acheson 2021). Further, scholars and advocates of disarmament have pointed out that while nuclear weapons use would cause indiscriminate death and injury, over the longer term, of those who are exposed to radiation, women and girls have a significantly higher risk of developing cancer than men and boys (Borrie et al. 2016). For example, in May 2020, ICAN tweeted, “The risk of developing and dying from solid cancer due to ionising radiation exposure is nearly twice as high for women as for men” (ICAN 2020a). On international women’s day that year, the same organisation published a video of its executive director and research coordinator discussing the links between gender and nuclear weapons (ICAN 2020b). More broadly, many feminists have argued that the indiscriminate

humanitarian consequences of nuclear explosions, as well as the hierarchical and arbitrary power structures associated with nuclear employment systems, make nuclear weapons fundamentally inconsistent with feminist values (Conway 2019; Pallapothu 2020).

But while feminist language may previously have been reserved primarily for the pro-disarmament side in the nuclear weapons debate, actors involved in the production and maintenance of nuclear weapon systems have in recent years embraced feminist rhetoric and imagery as well. In so doing, the nuclear industry borrows from and builds on mainstream corporate feminism dating back to the 1970s and 1980s (Eisenstein 2005). According to Rottenberg (2017), this form of feminism has increasingly encompassed a neoliberal governmentality centred on individual utility maximisation. The actors involved in the US nuclear weapons complex frequently project narratives about gender equality and the empowerment of women on social media (see Jester 2023). For example, contractors involved in the US nuclear weapons complex, such as Lockheed Martin, Northrop Grumman, Boeing, Fluor, General Dynamics, Raytheon, and BAE Systems, as well as the national nuclear labs Los Alamos, Sandia, and Lawrence Livermore, routinely disseminate aspirational messages about “women”, “equality”, and “diversity” on Twitter. For labs and arms contractors, a particular focus has been the agenda of encouraging more girls to pursue careers in STEM. Under hashtags such as #GirlPower and #GirlsRock, companies in the nuclear weapons industry frequently showcase their support for girls’ education (see, e.g., BAE Systems 2013; Fluor 2018; Boeing Defense 2018). In this outreach, the respective arms companies are predictably cautious about using words such as “weapons”, “warheads”, and “missiles”, preferring instead to talk about “science”, “engineering”, and “security”. The Twentieth US Air Force Wing, which operates the ICBMs, has a dedicated shoulder patch depicting a female service member flexing her bicep (in the manner of “Rosie the Riveter” on the famous “We can do it” feminist poster) with the slogan “We put the ‘miss’ in missileer”. This emphasis on empowerment, especially self-empowerment, is encoded with neoliberal ideas of self-reliance (Rottenberg 2017).

Probably in response to changing social norms and censure, entities in the nuclear complex appear increasingly eager to break down the impression of the nuclear weapons enterprise as overly masculine. For instance, Los Alamos National Laboratory maintains an Instagram page through which it documents the life of the organisation. Intriguingly, the account significantly over-represents its female employees, suggesting that the laboratory is keen to undercut the traditional understanding of the nuclear complex as a boys’ club. As of 7 April 2022, Los Alamos’ Instagram page featured 109 photos of humans. Of those, 51 were of women, 41 were of men, and 18 were of groups that included both men and women. This contrasts with Los Alamos’ actual gender balance, which has men outnumbering women two to one—three to one at senior levels (Los Alamos National Laboratory 2019). Clearly, what a company projects to the outside world is not always reflective of the reality on the inside, let alone the deeper-lying assumptions and imaginaries on which the enterprise is based. In the context of the nuclear weapons enterprise, critical scholars have argued that nuclear deterrence reflects a “macho” worldview not primarily because it is performed by men but because it relies on masculine-coded values such as



emotional distance, a capacity for ferocious violence, and effective top-down control (Acheson 2021; Conway 2019; Cohn 1987. On the ‘illusion of [nuclear] control’, see Pelopidas 2017).

The Pantex Plant, the United States’ main facility for the assembly and disassembly of nuclear warheads, maintains a YouTube account with a large selection of videos. In one of the first videos published by the Pantex account, titled “Women in History”, two female managers of the NNSA offer words of encouragement to girls contemplating careers in science and technology: “Don’t let anybody get in your way!” and “To the girls in science, I have one piece of advice: Science is really cool.” One of the interviewees further maintains that “having the empathetic skills and the sympathetic skills of a mom” has helped her at work (Pantex 2017). Traits associated with femininity, in other words, can still be combined with, and even used to reinforce, the production of weapons of mass destruction. At the time of recording (2 April 2022), the video has been viewed a meagre 151 times, and the Pantex account as a whole has only 216 subscribers. The apparent insistence on making content in spite of lacking demand from viewers could be indicative of a sense within the organisation that it is important to be ahead of the curve in the information space. By producing this content, it seems, the nuclear industry aims to deter the claim that it is blind to gender-related inequalities.

Combining objectives ostensibly linked to women’s rights or empowerment with military activity has a long history. It is discernible, for example, in the US government’s rhetoric of saving women through the invasion of Afghanistan in 2001 (Abu-Lughod 2013). In addition to using women’s liberation as an objective of a military campaign, this process also entailed recruiting women into practices of militarism through the creation of new all-female teams within the US military to engage Afghan women (Dyvik 2014) and sponsoring the Kabul Beauty School (Nguyen 2011). As Nicola Pratt argues, the discourse of liberal feminism has been utilised in international security policy in support of hegemonic practices such as the War on Terror and US hegemony more broadly (Pratt 2013).

Entities involved in the nuclear weapons enterprise occasionally speak of intersectionality as well as women’s rights. However, intersectionality is invariably reduced to imply a set of identities to be represented rather than a “matrix of domination” as described by Olufemi (2020, p. 7). This approach to intersectionality overlooks histories of epistemic and institutional racism, particularly the ways in which the nuclear industry was based on racialised exploitation and how it has internalised colonial attitudes to the international system (Turner et al. 2020; Runyan 2018; Voyles 2015). As we show, the nuclear industry glosses over these systemic issues, focusing instead on elevating individuals from particular groups within existing structures.

### 3.2 Sponsorship

Another mode of feminist practice in the nuclear field is sponsorship of women’s organisations or causes. We define sponsorship as the donation of financial or other resources by actors in the nuclear policy space with the aim of supporting women, feminists, or the cause of gender equality in the field. This mode of engagement is

reserved for actors with access to considerable material resources, in other words primarily to wealthy governments, major companies, and foundations. While there is generally less money on the pro-disarmament side of the nuclear debate (Perry and Collina 2020, p. 126), foundations have occasionally earmarked sponsorship to feminist disarmament groups or diversity initiatives. For example, the Ploughshares Fund, a US foundation that provides funding for nuclear non-proliferation and disarmament activities, launched in 2020 a “women’s initiative” to “increase the voices and roles of women in national security and to ensure their ability to craft and influence US nuclear policy” (Ploughshares Fund 2020). Through the initiative, Ploughshares committed to providing a total of \$1 million in grants to women or women-led organisations in the field. The MacArthur Foundation, which is set to leave the nuclear policy space, announced in 2022 a set of “capstone” grants. This included \$2.7 million to Girl Security (see below), Ploughshares, the Truman Center, and the Center for International Security and Cooperation at Stanford University to “cultivate diversity and empower new voices and underrepresented communities in the nuclear talent pipeline” (MacArthur Foundation 2022).

Sponsorship is a favoured practice of defence contractors. For instance, in 2021, Lockheed Martin—the company responsible for the maintenance of US nuclear ICBM re-entry vehicles and the production and maintenance of US and UK nuclear submarine-launched ballistic missiles—sponsored Girls Inc., an organisation that encourages girls to be “strong, smart, and bold”, and Million Girls Moonshot, an organisation that exists to help girls become engineers, with \$1.25 million. This and other sponsorship programmes were actively promoted on social media (see, e.g., Lockheed Martin 2021). Along with fellow arms contractors Raytheon, Bechtel, and Boeing, Lockheed Martin has also sponsored Women in International Security, “the premier organisation in the world dedicated to advancing the leadership and professional development of women in the field of international peace and security” (WIIS 2022). BAE Systems, a key contractor for the US submarine-based ballistic missile programme, sponsors American Association of University Women and has been a major supporter of Pride events in the United Kingdom. Raytheon, the lead contractor for the next generation of US air-launched nuclear-tipped cruise missiles sponsors the Center for Strategic and International Studies’ (CSIS) “Smart Women” podcast, a programme devoted to exploring “in-depth conversations with women leaders from around the globe” (CSIS 2022a).

Along with Lockheed Martin, Raytheon also sponsors the Girl Scouts of America. Raytheon’s partnership with the Girl Scouts stretches back several years, peaking with a slick 2018 video ad called “Think Like a Programmer”. In the video, girl scouts were shown studying equations and images on large electronic screens against a background of upbeat music and girls’ voices saying things like “maybe I’ll be a robotics engineer [...] or a rocket scientist!” The video, and Raytheon’s partnership with the Girl Scouts more broadly, seemed geared towards painting a picture of Raytheon as a responsible, progressive company with deep concern for gender equality and education. However, the message did not go down well with a large section of the audience, as the video provoked a wave of criticism and ridicule online. Blue-tick Twitter users with large followings argued that “In any sane universe, fucking \*Raytheon\* being a corporate sponsor of the \*Girl Scouts\* would be all

anyone could talk about for the next four months” (Tremendous 2019), that “We truly live in a dystopia, where corporate weapons-manufacturing death profiteers team up with the Girl Scouts to try to rebrand” (Norton 2019), and that the partnership reflected the “cynical weaponization of diversity for good PR” by “a company making machines of death” (Kulinski 2018). The Girl Scouts, one youtuber maintained in a reaction video, had gone “from selling cookies to selling nukes” (Kitz’s Corner 2019). Likely in response to the backlash, Raytheon quietly removed the ad from its YouTube account in 2020.

Several governments have in recent years provided funding for research on the nexus of gender and disarmament, in particular on the topic of gender balance in international security forums (see above). The funders of this strand of research include not only disarmament advocates such as Ireland, but also, for example, nuclear-armed United Kingdom. The gender and disarmament work of the UN Institute for Disarmament Research, for instance, is funded by Canada, Ireland, Norway, Sweden, and the United Kingdom. Canada, which has been heavily criticised by feminists for its unwillingness to foreswear nuclear deterrence (Broadhead and Howard 2019), also funds the London-based think tank BASIC to work on “Gender, Youth and Diversity” and the World Institute for Nuclear Security to promote gender equity in the field. In some countries, the promotion of gender diversity has sparked intense controversy (Hurlburt, Weingarten, and Souris 2018, p. 12). In others, however, gender talk and inclusion is politically safe ground, providing a relatively easy and cost-free route to performing liberal, progressive values short of, for example, signing the TPNW and renouncing nuclear deterrence (Brown and Considine 2022, p. 1255).

Sweden, until recently a champion of so-called feminist foreign policy (FFP), has framed its provision of financial support for the IAEA’s work to assist countries in the use of nuclear techniques to address breast and cervical cancer as a contribution to the feminist cause (Siewert 2020). At the same time, Sweden has been slated by Swedish feminist organisations for its refusal to sign the TPNW (see, e.g., IKFF 2018; Gomez 2019; Kvinnofronten 2020). France, for its part, combines an avowed FFP posture with the retention and ongoing modernisation of an independent nuclear arsenal composed of nuclear-powered ballistic missile submarines and aircraft capable of launching nuclear-headed cruise missiles. Unsurprisingly, critics have questioned the compatibility of a truly feminist foreign policy with France’s “retention and strengthening of its nuclear arsenal” (Haastrup 2020, p. 14). The French minister of the armed forces has not responded to these criticisms. However, on international women’s day in 2019, she launched a campaign to promote representational gender equality in the French armed forces (Sasin 2019).

### 3.3 Mentorship and networking

A third mode of liberal feminist practice in the nuclear field is the establishment and implementation of mentorship arrangements for women eager to enter and climb in the world of nuclear defence policy and international security. Much like sponsorships and financing more broadly, mentoring is often a privileged space for those who have access to resources.

The above-mentioned organisation Women in International Security was established already in 1987. Today, the organisation cooperates inter alia with the Nuclear Threat Initiative (NTI) and Gender Champions in Nuclear Security (GCNS) to mentor and support women in the international security field. The latter is a leadership network that seeks to bring together heads of organisations working in nuclear policy “who are committed to break down gender barriers and make gender equity a working reality in their spheres of influence” (GCNP 2022). Housed at NTI, GCNP is founded on the idea that gender equality should be pursued both as an end in itself and as a tool to improve policy outcomes:

Not only is gender equality necessary from the perspective of democracy and justice, it is essential to achieve and maintain peace and security. Research has repeatedly shown that diverse teams generate the best outcomes, and that women’s presence and contributions to peace and security discussions add value and sustainability to policies and impact (GCNP 2022).

The discourse of improving outcomes through increased diversity extends beyond the nuclear industry; as mentioned above, it has become common sense within the UN on a variety of topics, ranging from economic development to security and counterterrorism (Calkin 2015; Razavi 2021). However, there is little evidence indicating that the influx of women will have much or any effect on US nuclear policy.

Several other organisations have also been established to help women enter and climb in the field. These include Girl Security, National Security Girl Squad, and Women of Color Advancing Peace, Security, and Conflict Transformation (WCAPS). The former two exist to help women of all backgrounds enter and climb in existing security institutions. Girl Security, the larger of the two, has received support from the MacArthur Foundation, Microsoft, Yahoo, and CSIS. In its own words, its mission is to prepare “girls, women, and gender minorities for national security through equity-informed learning, transitional high school-to-college training, and relationship-based mentoring.” According to Girl Security, women “have remained grossly under-represented [in the field of national security] for decades, hindering their economic potential and impeding their leadership in this consequential field” (Girl Security 2022). WCAPS was established in 2017 by Bonnie Jenkins, the current US Under Secretary for Arms Control, to help advance the professional development of women of colour—a particularly underrepresented demographic in the field.

Another type of mentorship arrangement is executive leadership training provided for and by individuals in the defence business and attendant industries. For example, CSIS, a centre consistently ranked as the world’s premier think tank in the field of national security, and an influential authority on nuclear deterrence, runs a “Women’s Global Leadership” programme “designed to raise women leaders” (CSIS 2022b). The programme charges a tuition of \$25,000. CSIS is a formally autonomous research centre, but has strong ties to the US military and weapons industry. The US government and arms contractors Northrop Grumman and Lockheed Martin are among the centre’s largest donors. The three national nuclear laboratories responsible for the development and maintenance of US nuclear warheads have all established women’s employee resource groups—Los Alamos’ Atomic Women,

Sandia's Women's Connection, and Lawrence Livermore's Women's Association, respectively. The Livermore group has its own T-shirts with the print "Nevertheless she persisted", a phrase that has been described as a "feminist rallying cry and meme for the Trump era" (Tovey 2017). The slogan grew out of the backlash provoked by the apparent attempt by US Republicans at silencing Democratic Senator Elizabeth Warren. The practice of printing t-shirts and slogans is an example of the well-documented phenomenon of commodifying feminist activism (Repo 2020). Such commodification is fundamentally de-politicising: it empties, packages, and sells feminism.

Several private arms contractors have also established women's networks, leadership programmes, or employee resource groups. Northrop Grumman, for example, maintains a "Women in Leadership" programme to promote women. Finally, the US military also maintains women's leadership programmes, including in the nuclear field. For example, STRATCOM has partnered with the United States Northern Command and Cornell University "to provide a tailored Women in Leadership Program certification" (The White House 2021).

### 3.4 Events and organising

A fourth and final mode of feminist practice explored in this paper is what we refer to as events and organising. Here we have in mind public performances or happenings that in concrete and tangible ways showcase ostensibly feminist principles. Of course, such activity often relies on relevant organisations and institutions having been set up in advance. Events could take the form of protests, marches, celebrations, conferences, seminars, or workshops. Feminist peace activists have a long history of various forms of protest. In the early 1980s, a group of feminist organisations in Europe established 24 May as "International Women's Day for Peace and Disarmament". The signposting of a particular day in the calendar provided opportunities for mobilisation. Also in the early 1980s, a British feminist peace group organised a march to protest the deployment of American nuclear cruise missiles to the UK Royal Air Force base in Berkshire, England. The march ended up becoming a camp that eventually got the name of Greenham Common Women's Peace Camp, and which became the subject of an important social science literature (Eschle 2013; Laware 2004; Cresswell 1994; Liddington 1991). Feminist disarmament advocacy has continued in the years since. For example, in 2017, the Women's International League for Peace and Freedom (WILPF) organised a "Women's March to Ban the Bomb" in support of the negotiation of the TPNW. While the main march took place in New York City, where the TPNW negotiations were to take place, approximately 150 solidarity actions—marches, rallies, seminars—were held around the world (WILPF 2017). WILPF, which is represented on ICAN's steering group, was established in 1915 and has chapters in 37 countries. On a day-to-day basis, WILPF's disarmament programme Reaching Critical Will provides expert commentary and analysis that is used by many organisations and governments in their work on arms control and disarmament (Ritchie and Egeland 2018; Kmentt 2021). While RCW remains an outsider within the US political system, in the diplomatic milieu at the

UN RCW plays the dual role of a pressure group and a source of information and expertise.

Increasingly, many of those with interests in the continued development and maintenance of nuclear weapons organise ostensibly feminist events and displays. For example, the NNSA in 2021 organised a virtual side event to the General Conference of the IAEA to “celebrate the role of women in nuclear security” (NNSA 2021). And, as discussed above, several arms contractors have embraced the goal of enhancing gender equality in STEM fields. In practice, this has often involved visits to schools or clubs or the organisation of company open days or science competitions. In turn, these events provide opportunities for both social and traditional media outreach. Events are often organised in small towns and typically get positive coverage in the local press. As an illustration, in November 2017, Lockheed Martin organised a “Women in Engineering Day” for high school girls in Burlington County, New Jersey. The *Burlington County Times* covered the event in an article called “Girl Power: Lockheed Martin Dedicates a Day to Encourage Young Women in STEM Fields”. The article described the world’s largest defence contractor and producer of key components for US and UK nuclear weapon systems as a “global security and aerospace company” involved in the design and development of “advanced technology systems, products and services” (McHale 2017). The article presented the day as a forthright effort at promoting women’s empowerment and did not mention the words “weapons”, “arms”, “nuclear”, “military”, or even “defense”. This focus on the uncontroversial objective of promoting more women in science, and the use of buzzwords around women’s empowerment, blurs the line between the military and civilian spheres.

Finally, as mentioned above, the ICBM wing of the US Air Force has for several years celebrated international women’s day, including by deploying all-female crews on 8 March (a date that has in many instances been appropriated, individualised, and stripped of its radical origins by commodified forms of feminism). The celebration was first held in 2016, when all ICBM alert crews and chosen B-52 flying crews were staffed by women for a day. In the official Air Force press release, a service member expressed humility and excitement at being involved in honouring “the heritage of women in aviation and the military during Women’s History Month” (US Air Force 2016). The women of the US ICBM fleet have been the subject of several admiring articles in news media, including women’s magazines *In Style* (Pulia 2020) and *Marie Claire* (McNally 2017).

#### 4 Diversity, contestation, legitimization

Feminist practice in the nuclear domain has traditionally been associated primarily with actors eager to accelerate disarmament or stigmatise nuclear weapons. The ideology of “nuclearism” (Falk and Lifton 1991, p. xix) was and remains male-coded in the sense that the values and assumptions underpinning nuclear deterrence overlap with traditional concepts of manliness, such as rationality, physical prowess, and top-down control (Acheson 2021; Cohn 1987). Moreover, the individuals responsible for the nuclear-armed states’ strategic policies were invariably all men; the policymakers

and strategists who designed US nuclear policy during the Cold War were the “wizards of Armageddon” (Kaplan 1983), a “nuclear priesthood” (Cochran 1965, p. 80), a “patriarchy” (Underwood 2019), “virtually all men” (Cohn 1987, p. 687). Yet this most visible and overt manifestation of what anti-war feminists would refer to as the nuclear patriarchy has faded considerably in recent years. As detailed in this paper, the nuclear policy domain has over the last few decades seen the introduction not only of women but also of liberal feminist practices and language geared towards gender equality and diversity, and, at least ostensibly, the empowerment of women. This change complicates the character of the power structure targeted by anti-war feminists eager to advance disarmament. It dilutes the traditional association between feminism and anti-nuclear movements.

Many of the liberal feminist practices discussed in this article may well be driven by sincere concerns with gender equality, female empowerment, or the promotion of feminist principles of solidarity. Yet many are also fundamentally focused on profit or political legitimation. While workplace non-discrimination and inclusion may be thought of as autotelic goods, it is difficult to escape the suspicion that many of the feminist gestures discussed in this article simultaneously form parts of more or less consciously articulated strategies to deflect criticism or retain social licence. As argued by Bjarnegård and Zetterberg (2022), given the association of gender equality with progressivism and future-oriented values, organisations with legitimacy problems can use gender equality to co-opt critics and boost their standing. Along these lines, critics have made the case that defence contractor BAE Systems’ efforts to promote gender equality and LGBTQI+ rights would have had more credibility were BAE Systems not one of the main suppliers of weapons to Saudi Arabia, a state that is not only notorious for a legal system that is oppressive towards women and LGBTQI+ rights (India 2022) but has also been involved in a seven year-long military campaign in Yemen that has disproportionately affected women and children (United Nations Population Fund 2021). A number of observers have identified the feminist gestures of actors in the defence industry and military as PR or purple-washing exercises enacted to soften the industry’s association with increasingly anachronistic—and politically damaging—toxic masculinity. According to one set of commentators, feminism “is increasingly being co-opted to promote and sell the U.S. military-industrial complex” (Spade and Lazare 2019). For another observer, we have entered the age of “intersectional empire” (Lovato 2021). In this view, powerful actors use diversity to obscure practices of domination and to rebrand themselves as progressive.

The strategy is sometimes effective. The appointment of women as CEOs of several of the United States’ largest arms companies fostered in 2018–2019 a wave of positive media stories about how the defence industry was changing for the better. For example, in a 2019 piece, a *Politico* reporter concluded that the influx of women to leadership positions in the United States’ defence industry and military establishment was “a watershed for what has always been a male-dominated bastion, the culmination of decades of women entering science and engineering fields and knocking down barriers as government agencies and the private sector increasingly weigh merit over machismo” (Brown 2019). The relatively high number of female CEOs in the defence industry contrasts with the reality in other sectors of the US

economy; as of 2018, fewer than five percent of the Fortune 500 companies were led by women (McLaughlin 2018). That said, the dominance of women among top defence contractor CEOs does not quite extend to the respective companies’ boards of directors, that is, the entities that appoint the CEOs in the first place. While three (until recently four) of the big five US defence contractors have female CEOs (i.e. 60/75%), their boards were as of April 2022 made up of only 37%, 31%, 31%, 19%, and 15% women, respectively.

The theory that defence contractors use feminist messaging to “purple-wash” their reputations leads to a hypothesis that such companies are more likely than others to refer to women, girls, and diversity in public outreach. But is this really the case? The data illustrated in Fig. 1 suggests that it is. Comparing the Twitter outreach of the companies and government laboratories involved in the US nuclear weapons programme with that of a control group, namely the first 50 companies on the Forbes 500 list of US corporations, it turns out that the former group tweets significantly more about “women” than the latter. The difference between the two groups grows even starker when the four oil companies present in the control group (which are also involved in a controversial industry and could therefore by hypothesised to have an interest in “purple-washing” as well) are excluded from the sample (see Control Group 2).

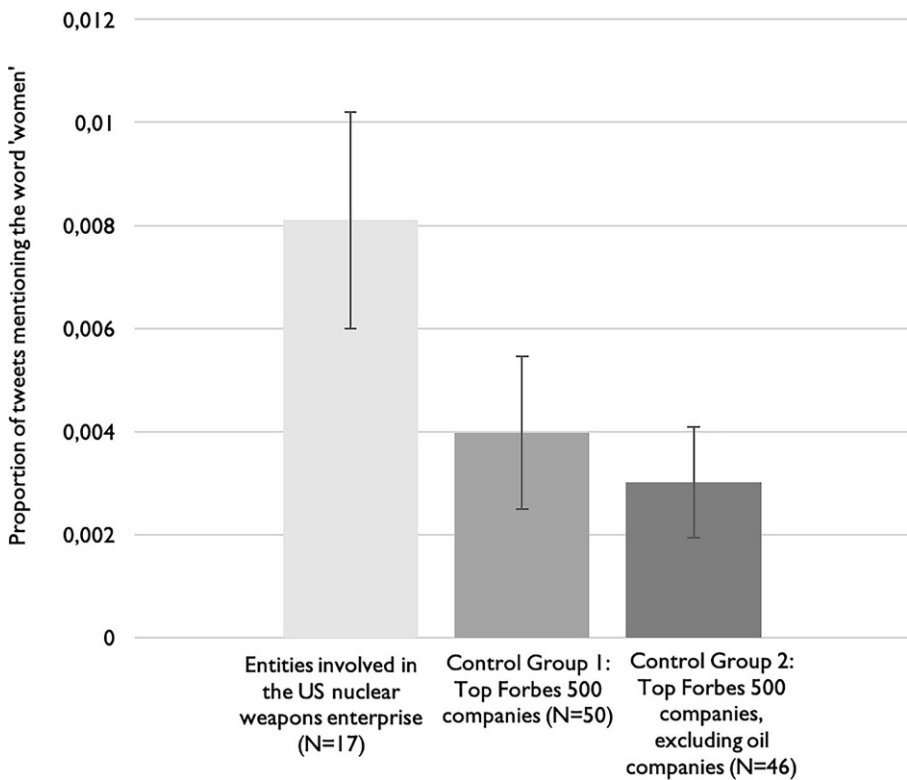


Fig. 1 How often do companies tweet about “women”? (95% CI)



Beyond the goals of inclusion and overall political legitimation, liberal feminist practices can be deployed to boost recruitment. According to an article published on CSIS' website, the United States is facing "negative political and cultural shifts" that could undermine the health of the nuclear weapons enterprise (Kattan 2018). Tapping into female talent to a greater extent than before is likely to be seen as desirable in this context.

## 5 Conclusion

The scholarly literature on the nexus between nuclear weapons and feminism has traditionally focused on women's disarmament advocacy, patriarchal structures that exclude women from nuclear policy spaces, and the gendered, masculine-coded language used by nuclear strategists. However, recent years have witnessed two trends that demand fresh interpretations of the role of women and gender equality in nuclear policy. First, women have assumed key positions in the US nuclear establishment. Second, the institutions that make up the US nuclear complex have adopted liberal feminist rhetoric and imagery in their outreach.

Accordingly, in this article, we have laid out and analysed the full range of *prima facie* feminist practices on display in the nuclear policy space, including practices enacted by actors traditionally conceived as constituents of the nuclear establishment or patriarchy. While feminist practices have historically contested the nuclear status quo, corporate actors in the nuclear weapons enterprise have in recent years embraced liberal feminist goals and language to future-proof their activities. The imaginaries underpinning the various feminisms on display are clearly contradictory. While for disarmament organisations feminism provides a lens and means of critiquing the continued production and deployment of nuclear weapons, for arms contractors such as Raytheon feminism offers a vehicle for the argument that women should be able to build careers in the (nuclear) defence industry on the same footing as men. This is a familiar tension between liberal or corporate feminism, on the one hand, and critical feminism, on the other. Yet, as we have suggested, the dispute in this case is not only a reflection of different approaches, but rather it highlights the nuclear industry's attempt to efface the association of feminism with being anti-war.

Rather than challenge existing structures and patriarchies—in this case the gendered nuclear order and narrative of top-down control—liberal feminist practices can also help to inoculate them. After all, patriarchy pertains not only to the number of men at the top, but also to broader systems of power. As critical feminists have argued, militarised spaces are already defined along masculine values, and bringing more women into patriarchal structures is insufficient to transform or transcend them (Enloe 2004; see also Biswas 2016). Many of the practices highlighted in this article are thus a testament to the ability of entrenched power structures to adapt to normative contestation and changes in the broader social environment. By appropriating feminism through the aesthetic inclusion of women, the nuclear industry normalises and legitimises itself in a new age.

**Funding** This study has received funding from the European Research Council under grant agreement No 759707 (NUCLEAR). The authors are grateful to Sanne Verschuren and Benoît Pelopidas for constructive comments and assistance.

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