Smashing the Patriarchy

The Feminist Case Against Killer Robots

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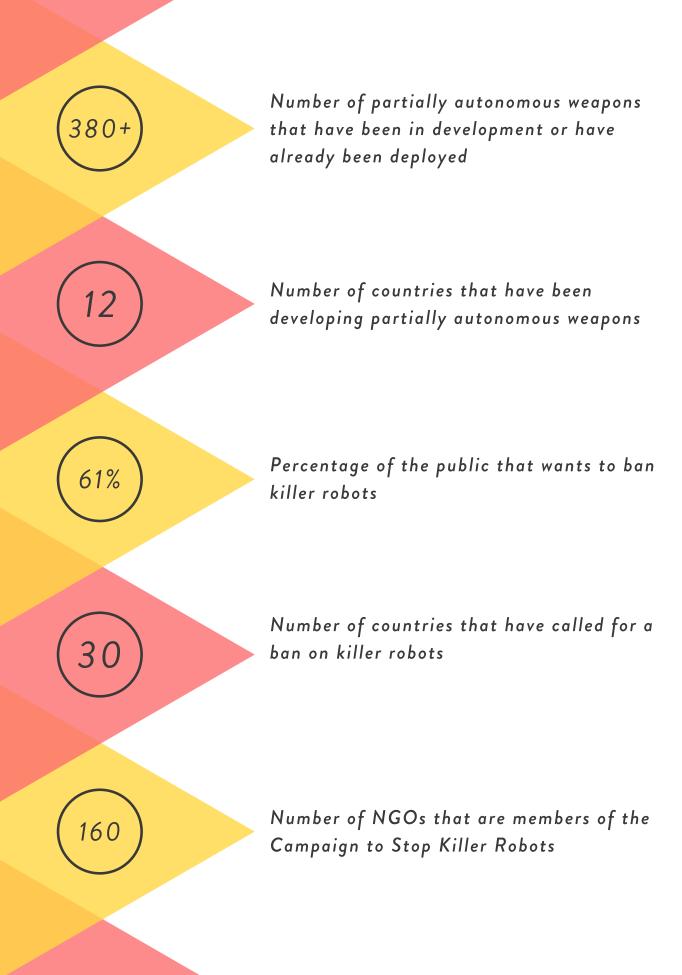
Introduction

Lethal autonomous weapons (LAWs), also known as killer robots, are weapons systems that select and fire upon targets without any human intervention. In order to do this, they use Artificial Intelligence (AI) programmed with algorithms and data analysis capabilities. Such weapons are worrying to actors across the policy, technology, and activist sectors for a multitude of reasons. This report will explore these concerns from a feminist perspective, with particular focus on how a Feminist Foreign Policy (FFP) would respond to such weapons.

Background on Killer Robots

Though the technology doesn't yet exist, experts predict we are not long off from successfully developing it (Haltiwanger, 2017). Over 380 partially autonomous weapons have been in development or have already been deployed by at least 12 countries, including China, France, Israel, Republic of Korea, Russia, the United Kingdom, and the United States (Busby, 2018). Though the technology for killer robots is not yet in existence, General Mark Milley, former Chief of Staff of the U.S. Army, has gone on the record to say their use will be widespread within a matter of years (Haltiwanger, 2017).

Despite the development and deployment of partially autonomous weapons, to date, 30 countries have called for a ban on killer robots, with the support of 61% of the public (Endorsers, 2020; The Campaign To Stop Killer Robots, 2020). However, at the last Convention on Conventional Weapons, the annual conference where decisions on a global ban are made, attending diplomats could not agree on a common approach and decided to continue the discussion about killer robots over the next two years (Brzozowski, 2019). Despite widespread interest in suspending the

380+ Number of partially autonomous weapons that have been in development or have already been deployed

12 Number of countries that have been developing partially autonomous weapons

61% Percentage of the public that wants to ban killer robots

30 Number of countries that have called for a ban on killer robots

160 Number of NGOs that are members of the Campaign to Stop Killer Robots

development of killer robots, policymakers, and particularly those in the UK, have yet to take meaningful action.

The Centre for Feminist Foreign Policy has joined the Campaign to Stop Killer Robots to call for a preemptive ban on killer robots alongside 159 other non-governmental organisations (NGOs) (About, 2020; Gender and Killer Robots, 2020). The potential for mass atrocities and human rights violations are too great a risk, and we see no reasonable circumstance in which these weapons can be justified in times of war or peace. This report will explore in greater details how killer robots are a feminist issue and how we at the Centre for Feminist Foreign Policy would recommend they be legislated under a Feminist Foreign Policy (FFP) framework.

Feminist Foreign Policy

Foreign policy has the potential to be a mechanism for equality, justice, solidarity, and peace, and the adoption of FFP is the best way to fully and meaningfully implement these values into government policy. First launched by the Swedish government in 2014, other countries followed suit by engaging to varying degrees with FFP or feminist policies, including Canada, France, the United Kingdom, the United States of America, Mexico, Spain, and Luxembourg (Feminist Foreign Policy, 2020). FFP has slightly different applications and interpretations within the context of each state and is understood differently in policy, activist, and academic circles. However, there are a few key themes that run throughout most understandings.

FFP is a political framework centred around the wellbeing of marginalised people. It is more than just a mechanism to enhance women's rights; FFP is concerned with the systems of power that oppress the marginalised, and how social categories, including gender, race, sexuality, class, and ability, for example, are key determinants of a person's ability to have access to power.

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By utilising a feminist lens and questioning power dynamics within a society and between states, the destructive forces of patriarchy, including colonisation, heteronormativity, capitalism, racism, imperialism, and militarism, become of central focus. The violent global systems that leave millions in perpetual states of vulnerability are thus of primary concern to an FFP framework (Feminist Foreign Policy, 2020).

Feminist Foreign Policy and Killer Robots

FFP addresses the root causes of violence and insecurity by calling for an institutional overhaul of foreign policy and national security. Our world is structured around the patriarchy and naturally, its systems and power hierarchies will be reflected in the weapons we produce.

This report will highlight some of the issues revealed when a feminist lens is turned onto killer robots. In Chapter 1, militarisation and masculinity will be explored, including how ideas about masculinity influence a militarised approach to national security. In Chapter 2, gender-based violence and the question of accountability are discussed. The distinction between combatant and civilian are blurred within a patriarchal and racist context, and the ability for killer robots to commit sexualised violence is highlighted. Lastly, in Chapter 3, racism and imperialism is analysed, with a look at how existing societal biases are built into any new technology we would produce. Finally, the report concludes with a summary of the policy recommendations included throughout each of the three chapters.

Militarisation and Masculinity

For decades, feminists have campaigned against the violent patriarchal structures that sustain conflict and keep an elite few in power. By building societal hierarchies so that only a small and specific group of people have access to the top - which often in Western countries means straight white men - particular ideas about who is best suited to lead become intrinsically linked to gender and gendered traits. This means the lens through which foreign policy is often conducted has its roots in stereotypical masculine characteristics that have historically been accepted as best for policymaking. These traits include things like being rational, strong, and assertive, while avoiding more feminine-coded traits like emotion or empathy. These ideas about gender feed directly into how national security is understood as a militarised space (Cohn, 2018).

Gender (referring to someone's identity as a man, woman, or gender non-conforming) and gendered traits (referring to concepts about masculinity and femininity) are overlapping but not entirely synonymous. Reference to masculinity here is done so with the understanding that it is a social construct based upon stereotypes to fuel a patriarchal hierarchy of power. The ability to exercise such traits, however, is not exclusive to men, and this report is not interested in reinforcing dated and static ideas of men as masculine

A FEMINIST FOREIGN POLICY FRAMEWORK CALLS FOR A BAN ON KILLER ROBOTS.

-Marissa Conway

and women as feminine. As bell hooks notes, "Black women are very likely to feel strongly that white women have been quite violent, militaristic in their support and maintenance of racism" (hooks, 1995). Anyone is capable of expressing a wide variety of characteristics. Furthermore, including other social categories like race or class into this consideration likewise continues to reveal a complicated system of power dynamics based around identity that play out both between individuals as well as states.

The power dynamics found in much of today's foreign and security policy are framed around realism, an ideology that understands state relationships through the lens of power optimisation. Part of this process means developing new weapons technology in order to continually seek military dominance. Killer robots fit in well with this strategy, and sustain a system that values maintaining power and security through military dominance. The means of keeping peace, then, rests upon the ability to threaten or inflict violence (Conway, 2016; Starr, 2020). Military domination becomes an easily justifiable form of peacekeeping, and masculine-coded traits like aggression and dominance are seen not just as fundamental to security policy, but taken as objective truth within security policy. In this sense, masculinity is systematised by associating ideas about manliness with the willingness to exercise violence (Cohn, 1993).

By centring masculine traits as preferential in security policy, "human bodies and their vulnerability, human lives and their subjectivity - all of which are marked as feminine in the binary dichotomies of gender discourse" (Cohn, 1992), get left out. By making it clear that ideas or traits that are coded as feminine are not legitimate, alternative ideas and approaches to security policy are silenced. However, an FFP framework is interested specifically in these silenced ideas, both to explore the fresh perspective they offer and to understand why they were silenced in the first place.

A feminist framing of security also takes a step back from the realist and masculine lens through which much of security policy is developed, and instead is interested in what makes the average person secure and safe. Much more immediate needs must be met when security is reframed with the average individual, rather than the state, in mind. Access to safe housing, healthy food, a good education, and affordable healthcare become some of the most prominent indicators of someone's health and wellness. The ability to lead a life free from discrimination due to gender, race, class, sexuality, or ability are also much better indicators for how sustainability peaceful a society is (Hudson, 2014). A strong military and extravagant weapons arsenal falls low on the lit of priorities in comparison. An FFP would then call for investment not into weapons technology and the military, but instead into the infrastructure of a society and programs to increase equality.

As long as militarisation is the lens through which security policy is developed, and gendered traits remain driving factors behind ideas about security, sustainable peace is not possible. By investing in new weapons technology, we are continuing down a path that guarantees violence rather than challenges it. Killer robots will not contribute to peace, but sustain a system where a narrow and patriarchal understanding of security is supported, continuing to leave many vulnerable and at risk of violence.

Feminist Foreign Policy Recommendations:

- *Redistribute money from defence budgets to strengthen the infrastructure of a society, including resources for more affordable housing, access to healthy food, access to a good education, and affordable healthcare.*

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Feminist Foreign Policy Recommendations (con't):

- *Invest in programmes focused on increasing gender equality within domestic and foreign policy.*

- *Prioritise diplomacy as the best possible tool to mediate conflict.*

- *Ban killer robots.*

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Gender-Based Violence and Accountability

Killer robots reinforce violence patriarchal structures, which have sustained a long and terrible legacy of targeting violence in gendered ways. The usage of killer robots raises a host of concerns as to how they might target innocent men as potential combatants, as well as increase sexualised violence against women, girls, and non-binary people. Many international regulations have been developed to protect people from gender-based violence, and yet, there is no accountability structure for weapons that operate completely autonomously, meaning these killer robots could commit unchecked violence.

Combatants or Civilians?

AUTONOMOUS WEAPONS ARE BEING DEVELOPED IN THE CONTEXT OF... NORMS OF GENDER AND POWER.

-Ray Acheson

Under the administration of President Obama, during which drone strikes became a critical act of US military intervention and targeted killing, the criteria for distinguishing between a civilian and a militant or terrorist was blurred to the point of non-distinction. The CIA counted all military-age males who were in a strike zone as combatants "unless there [was] explicit intelligence posthumously proving them innocent" (Becker and Shane, 2012). The reasoning behind this (il)logic was that if people are spending time around known terrorist hotspots, then they would likely be up to "no good". This resulted in incredibly low reported rates of civilian

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casualties, as almost all men killed were considered to be combatants.

This is but one example of how profiling based on gender, or any social category for that matter, can be twisted in a way that creates a tangible threat for people who simply share the gender of the target profile. Given the lack of clarity as to how combatants are defined, there is a high risk of false positives and targeting of innocent civilians. Developing sound regulations and processes that would guarantee the safety of civilians is an incredibly challenging, and probably impossible, task (Moyes, 2019). Attempts to do so would also place the burden of navigating legal obligations onto AI, a technology which does not have the capacity to make the kind of judgement calls humans are capable of. Killer robots would not be able to identify nuances within a target profile, and without meaningful human intervention, would always result in the use of force, therefore risking the death of innocent people (Moyes, 2019).

Sexualised Violence

Gender-based violence also manifests in sexualised violence, including the rape, forced pregnancy, slavery, and torture of women, girls, and non-binary people. While proponents for killer robots have argued that such machinery would reduce sexualised violence, the uncomfortable truth is that the opposite is likely (Sandvik and Lohne, 2015). Acts of this nature are often used purposefully in conflict scenarios as a mechanism to instil fear, humiliation, and shame, or for purposes of ethnic cleansing. A killer robot, with no conscience or ability to reject unethical instructions, would execute orders based upon whatever programming it received, including orders to commit sexualised violence (Sharkey, 2020). The assumption that new technology would function precisely as it "should" without consideration of the context in which it's developed, as well as the motives of the user, is a reckless presumption (Sandvik and Lohne, 2015).

United Nations Security Council Resolution 1820 (2008) takes a specific focus on the use of sexualised violence as a weapon of war and war crime, unilaterally condemning it in alignment with the Rome Statute of the International Court and the Geneva Convention (UN General Assembly, 1998; International Committee of the Red Cross, 1949). However, should these weapons commit such atrocities, their distance from human intervention begs the question of legal accountability. Killer robots themselves cannot be tried for crimes. So who, then, should bear that responsibility (Acheson, 2020)?

Ultimately, human intent and system performance can never be fully consistent when it comes to killer robots. This misalignment is of grave concern to a FFP framework. As gender equality and protecting vulnerable populations is of central concern to FFP, the potential for gender-based violence should killer robots be developed is simply too great a risk to take. The margin of error of these weapons results in the death of innocent people, a risk that should be considered too great to consider this technology usable.

Feminist Foreign Policy Recommendations:

- *Develop legal mechanisms to hold those distinguishing between civilians and combatants to justice.*

- *Prioritise a gender and race lens across all areas of national security analysis, both within research and within policy development.*

- *Ban killer robots.*

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Racism and Imperialism

As noted throughout this report, the current state of foreign policy, and in particular national security, is rooted in deeply patriarchal values. This can be seen perhaps none more acutely than when we turn an anti-racist lens to conflict, where violence is sanctioned to reinforce specific ideas about imperial power and white supremacy. As killer robots would use technology that carries existing biases, developing these weapons would only further reinforce violence and discrimination against Low Income Countries (LICs) and against people of colour.

In Western states, people of colour are traditionally underrepresented in science, technology, engineering and mathematics (STEM) fields. Technology is a field still dominated by white men, which means that it will also reflect a specific set of biases that privilege white men. Target profiles are an excellent example of how this plays out in practice. In the context of killer robots, developing weapons technology that can select and fire upon targets independent of human involvement guarantees that people of colour will disproportionately suffer violence. In a recent study from the US government, it was demonstrated facial recognition technology does in fact reflect racism in dangerous ways. In the case of one-to-one matching, or when an algorithm matches two photos of the same person, Black and Asian faces were falsely matched between ten to 100 times more than

WEAPONS ARE TOOLS OF COLONIAL AND IMPERIAL POWER, FUELLING WAR AND CONFLICT THAT DISPROPORTIONATELY AFFECTS VISIBLE MINORITIES AND MARGINALISED COMMUNITIES.

-Hayley Ramsay Jones

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white faces. And in instances of one-to-many matching, where one photo is compared to many others in a database, Black women were more likely to be misidentified (Facial Recognition Fails on Race, Study Says, 2019). In the UK, a report from Big Brother Watch showed that the facial recognition technology the London Metropolitan Police used at the 2017 Notting Hill Carnival, a street parade celebrating Caribbean music and culture, misidentified people at a rate of 98% (Big Brother Watch, 2018).

These are only two examples of how racism is inevitably built into and reflected in our technology. For these exact reasons, facial recognition software is being abandoned by developers, like IBM, and banned by users, like the city of San Francisco. In the wake of the 2020 Black Lives Matter protests after the murder of George Floyd by police officers, newfound scrutiny has been given to facial recognition technology, resulting in growing widespread agreement that it is too dangerous to use. Timnit Gebru, for example, who is one of Google's ethical artificial intelligence team leads, recently went on the record to confirm the risks of facial recognition technology, arguing that it's too dangerous to be used for law enforcement purposes (Ovide, 2020).

It is clear that the algorithms and AI that killer robots would be programmed with are not capable of eliminating the risk of wrongful death without human intervention. Should violence become automated, "power disparities based on racial and other hierarchies" would cause "irreparable harm to targeted communities" (Ramsay-Jones, 2020). And while facial recognition software is an apt example used throughout this report, it is not a standalone example of a poorly programmed algorithm or a piece of problematic technology. The reflection of systemic racism across all current technology makes it clear that self-governing weapons like killer robots would only increase violence against people of colour. Attempts to counter the bias built into technology can only be done through meaningful human intervention in the deployment

and use of weapons. The fully autonomous nature of killer robots would render such a process impossible, guaranteeing that communities of colour would suffer increased violence.

The imperialist patterns of the global hierarchy must be likewise taken into account. As it currently stands, the technology for killer robots is concentrated in just a handful of powerful, mostly Western states that have ample resources to spend on developing AI (Haner and Garcia, 2019). These countries, which tend to be led by white men, use weapons and the threat of violence to maintain "peace" to keep other states in line with their wishes. Killer robots would reinforce these hierarchies, and would be developed by High Income Countries (HICs) to be used in LICs. It would be a case of HICs using killer robots to maintain their status within the global hierarchy, as well using it against their own people to maintain specific power hierarchies within their own borders (Reaching Critical Will, 2018).

As Joy Buolamwini argues, "[w]e have a responsibility to think about how we create equitable and accountable systems, and sometimes what that means is you don't create the tool" (Wood, 2020). People of colour and people in LICs have been historically excluded from decision making spaces, yet experience the consequences of those decisions regardless. In the case of killer robots, and in parallel with a long history of using people of colour as test subjects for new science developments, it is unlikely that killer robots will do anything but amplify violence (Ramsay-Jones, 2020). Simply put, they should not exist.

Feminist Foreign Policy Recommendations:

- *Ban the use of facial recognition software in any sort of law enforcement or conflict scenario without powerful and 100%*

Feminist Foreign Policy Recommendations (con't):

accurate accountability mechanisms to account for the margin of error.

- Develop and significantly resource STEM programmes targeting girls and people of colour to ensure greater diversity in this field.

- Individually, identify how our own day-to-day world is influenced by white privilege and work to build a stronger anti-racist society, beginning with ourselves.

- Ban killer robots.

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Conclusion

A Feminist Foreign Policy framework is invested in addressing the root causes of insecurity, and so recognises that as long as national security is developed through a patriarchal, militarised, sexist, and racist lens, we will never be able to build a sustainably peaceful world. The potential for mass atrocities and human rights violations caused by the development of killer robots present too great a risk, and we at the Centre for Feminist Foreign Policy see no reasonable circumstance in which these weapons can be justified. Ultimately, killer robots will contribute to greater violence, and must be pre-emptively banned.

Summary of Feminist Foreign Policy Recommendations

- Redistribute money from defence budgets to strengthen the infrastructure of a society, including resources for more affordable housing, access to healthy food, access to a good education, and affordable healthcare.

- Invest in programmes focused on increasing gender equality within domestic and foreign policy.

- Prioritise diplomacy as the best possible tool to mediate conflict.

- Develop legal mechanisms to hold those distinguishing between civilians and combatants to justice.

- Prioritise a gender and race lens across all areas of national security analysis, both within research and within policy development.

- Ban the use of facial recognition software in any sort of law enforcement or conflict scenario without powerful and 100% accurate accountability mechanisms to account for the margin of error.

- Develop and significantly resource STEM programmes targeting girls and people of colour to ensure greater diversity in this field.

- Individually, identify how our own day-to-day world is influenced by white privilege and work to build a stronger anti-racist society, beginning with ourselves.

- Ban killer robots.

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References

Acheson, R., 2020. A WILPF Guide To Killer Robots. [online] Women's International League for Peace and Freedom. Available at: <https://www.reachingcriticalwill.org/images/documents/Publications/wilpf-guide-aws.pdf> [Accessed 5 August 2020].

BBC News. 2019. Facial Recognition Fails On Race, Study Says. [online] Available at: <https://www.bbc.co.uk/news/technology-50865437> [Accessed 12 August 2020].

Becker, J. and Shane, S., 2020. Secret 'Kill List' Proves A Test Of Obama'S Principles And Will. [online] Available at: <https://www.nytimes.com/2012/05/29/world/obamas-leadership-in-war-on-al-qaeda.html?pagewanted=9&_r=1&hp&adxnnlx=1338289213-gFazCDrgzwY2RtQ CER9fGQ&pagewanted=all> [Accessed 6 August 2020].

Big Brother Watch, 2018. Face Off: The Lawless Growth Of Facial Recognition In UK Policing. [online] Available at: <https://bigbrotherwatch.org.uk/wp-content/uploads/2018/05/Face-Off-final-digital-1.pdf> [Accessed 12 August 2020].

Brzozowski, A., 2019. No Progress In UN Talks On Regulating Lethal Autonomous Weapons. [online] EURACTIV. Available at: <https://www.euractiv.com/section/global-europe/news/no-progress-in-un-talks-on-regulating-lethal-autonomous-weapons/> [Accessed 20 May 2020].

Busby, M., 2018. Killer Robots: Pressure Builds For Ban As Governments Meet. [online] The Guardian. Available at: <https://www.theguardian.com/technology/2018/apr/09/killer-robots-pressure-builds-for-ban-as-governments-meet> [Accessed 20 May 2020].

Centre for Feminist Foreign Policy. 2020. Feminist Foreign Policy. [online] Available at: <https://centreforfeministforeignpolicy.org/feminist-foreign-policy> [Accessed 20 May 2020].

Cohn, C., 2018. The Perils Of Mixing Masculinity And Missiles. [online] New York Times. Available at: <https://www.nytimes.com/2018/01/05/opinion/security-masculinity-nuclear-weapons.html> [Accessed 27 July 2020].

Cohn, C.W., 1993. Wimps and woman: Talking Gender and Thinking War. Cooke/Woollacott (eds.), Gendering War Talk, 232.

www.centreforfeministforeignpolicy.org

Conway, M., 2016. A Feminist Analysis Of Nuclear Weapons: Part 1 - Hegemonic Masculinity. [online] Centre for Feminist Foreign Policy. Available at: <https://centreforfeministforeignpolicy.org/journal/2016/12/30/a-feminist-analysis-of-nuclear-weapons-part-1-hegemonic-masculinity> [Accessed 4 August 2020].

Haltiwanger, J., 2017. Russia's Military Has New Robot Tank It Says Fights Better Than Human Soldiers. [online] Newsweek. Available at: <https://www.newsweek.com/russia-military-new-robot-tank-fights-better-human-soldiers-706836> [Accessed 20 May 2020].

Haner, J. and Garcia, D., 2019. The Artificial Intelligence Arms Race: Trends and World Leaders in Autonomous Weapons Development. Global Policy, 10(3), pp.331-337.

hooks, b., 1995. Feminism and militarism: A comment. Women's Studies Quarterly, 23(3/4), pp.58-64.Hudson, V., 2014. Sex And World Peace. New York: Columbia University Press.

International Committee of the Red Cross (ICRC). Geneva Convention Relative to the Protection of Civilian Persons in Time of War (Fourth Geneva Convention). 12 August 1949. 75 UNTS 287. [online]` Available at: https://www.refworld.org/docid/3ae6b36d2.html [accessed 6 August 2020].

Moyes, R., 2019. Target Profiles. Discussion Paper. [online] Article 36. Available at: <http://www.article36.org/wp-content/uploads/2019/08/Target-profiles.pdf> [Accessed 6 August 2020].

Ramsay-Jones, H. 2020. "Intersectionality and Racism," in Hunt, E., 2020. Campaign To Stop Killer Robots: The Campaigner's Kit. Campaign to Stop Killer Robots.

Reaching Critical Will. 2020. Fully Autonomous Weapons. [online] Available at: <https://www.reachingcriticalwill.org/resources/fact-sheets/critical-issues/7972-fully-autonomous-weapons> [Accessed 20 May 2020].

Reaching Critical Will, 2018. Statement To The 2018 CCW Group Of Governmental Experts On Lethal Autonomous Weapon Systems 29 August 2018: "The Way Ahead". [online] Available at: <https://www.reachingcriticalwill.org/resources/statements/13535-wilpf-statement-to-the-ccw-group-of-governmental-experts-on-lethal-autonmous-weapon-systems> [Accessed 12 August 2020].

Sandvik, K. and Lohne, K., 2015. Lethal Autonomous Weapons: Killing The 'Robots-Don't-Rape' Argument – PRIO Blogs. [online] Available at: <https://blogs.prio.org/2015/08/lethal-autonomous-weapons-killing-the-robots-dont-rape-argument/> [Accessed 6 August 2020].

Starr, T., 2020. The Problem With Threatening Violence To Keep The Peace. [online] Outrider. Available at: <https://outrider.org/nuclear-weapons/articles/problem-threatening-violence-keep-peace/> [Accessed 5 August 2020].

Sharkey, N., 2020. A Feminist Future Begins By Banning Killer Robots. [online] Forbes. Available at: <https://www.forbes.com/sites/noelsharkey/2020/03/08/a-feminist-future-begins-by-banning-killer-robots/#1a9968341fd8> [Accessed 6 August 2020].

The Campaign to Stop Killer Robots. 2020. About. [online] Available at: <https://www.stopkillerrobots.org/about/> [Accessed 29 June 2020].

The Campaign To Stop Killer Robots. 2020. Endorsers. [online] Available at: <https://www.stopkillerrobots.org/endorsers/> [Accessed 20 May 2020].

The Campaign to Stop Killer Robots. 2020. Gender And Killer Robots. [online] Available at: <https://www.stopkillerrobots.org/gender-and-killer-robots> [Accessed 20 May 2020].

The Campaign To Stop Killer Robots. 2020. The Campaign To Stop Killer Robots. [online] Available at: <https://www.stopkillerrobots.org/> [Accessed 29 June 2020].

UN General Assembly. Rome Statute of the International Criminal Court (last amended 2010). 17 July 1998. ISBN No. 92-9227-227-6. [online] Available at: https://www.refworld.org/docid/3ae6b3a84.html [accessed 6 August 2020].

UN Security Council. Security Council resolution 1820 (2008) [on acts of sexual violence against civilians in armed conflicts]. 19 June 2008. S/RES/1820 (2008). [online]` Available at: https://www.refworld.org/docid/485bbca72.html [accessed 6 August 2020].

Wood, M., 2020. Why The Racism In Facial Recognition Software Probably Can't Be Fixed. [online] Marketplace. Available at: <https://www.marketplace.org/shows/marketplace-tech/facial-recognition-software-racism-people-of-color-wrongful-arrests-algorithmic-bias/> [Accessed 12 August 2020].