

GENDER AND BIAS

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What does gender have to do with killer robots?



First of all, a note about gender. Gender doesn't mean biological sex. It means the socially constructed norms of how we are supposed to act as women and men or trans, non-binary, or queer identities.

These norms can and do affect how we think about weapons, war, and violence. Throughout history, we have seen that weapons symbolize power. The association of weapons with power comes from a very particular—and very dominant—understanding of masculinity. This is not to say that all men agree with or perpetuate this idea, but that this is widely considered the norm or standard for masculinity.

This is a masculinity in which ideas like strength, courage, and protection are equated with violence. It is a masculinity in which the capacity and willingness to use weapons, engage in combat, and kill other human beings is seen as essential to being “a real man”.

This type of violent masculinity harms everyone. It requires oppression of those deemed “weaker” on the basis of gender norms. It results in domestic violence. It results in violence against women. It results in violence against gay and trans people. It also results in violence against men.

Men mostly kill each other, inside and outside of conflict. A big part of this is about preserving or protecting their masculinity—a masculinity that makes male bodies more expendable. Women and children, obnoxiously lumped together as if they are the same thing, are more likely to be deemed “innocent civilians,” while men are more likely to be considered militants or combatants.

We are all suffering from the equation of violence and power with masculinity. It prevents those

who identify as men from being something else—from acting outside the normative behaviour for men. It prevents gender equality or justice, reinforcing the binary between men and women and negating the existence of other experiences and identities. It prevents all of us as human beings to explore strength, courage, and protection from a nonviolent perspective. It makes disarmament seem weak. It makes peace seem utopian. It makes protection without weapons seem absurd.

Looking at weapons through a gender lens is not just an academic exercise. It can help inform disarmament and armament policy. To bring us back to the question at hand—what does gender have to do with killer robots—we can see that understanding the gendered context and implications of certain weapons helps us understand the best way to prevent humanitarian harm. Autonomous weapons, also known as fully autonomous weapons, may perpetuate negative gender norms, or be used to commit acts of gender-based violence. These possibilities are useful for demonstrating the need for meaningful human control over weapon systems and prohibiting weapons that operate without such control.

A GENDER ANALYSIS OF TECHNOLOGY AND AUTONOMOUS WEAPONS

Autonomous weapons are being developed in the context of the aforementioned norms of gender and power. Scholars of gender and technology have long argued that gender relations are “materialized in technology”. That is, the meaning and character (the norms) of masculinity and femininity are “embedded” in machines. These scholars argue that technological products bear their creators' mark. If technology is developed

and utilized primarily by men operating within a framework of violent masculinity, their creations will be instilled with that framework of thought, knowledge, language, and interpretation.

Erin Hunt of Mines Action Canada has noted that “human biases are baked into the algorithms and the data we use to train a machine learning program often reflects our own patriarchal society with its class and race issues.” She argues, “One thing to keep in mind is that only around 0.0004% of global population has the skills and education needed to create [artificial intelligence] programming and most of those people were born into pretty privileged circumstances. Similarly, a recent estimate done by WIRED with Element AI found that only 12% of leading machine learning researchers were women.”

In this context, autonomous weapons, as tools of violence and of war, will likely have specific characteristics that may simultaneously reinforce and undermine hegemonic gender norms. This in turn may have implications for the notion of men as expendable and vulnerable, as predators and protectors, and pose serious challenges for breaking down gender essentialisms or achieving gender equality or gender justice in a broader context.

PROJECTING “POWER WITHOUT VULNERABILITY”

If we look at how armed drones are used and thought about now, we can see that the development of fully autonomous weapons present similar risks. The argument for these weapons is similar: drones and autonomous weapons are described as weapons that can limit casualties for the deploying force, and that can limit civilian casualties in areas where they are used because

they will be more precise. It is a typical argument from the perspective of violent masculinity: those using the weapon can deploy violence without fear of facing physical danger themselves; and in turn argue that it will actually result in less violence.

Yet as we have seen with drones, this—at least, the later argument—is far from the case. The tools and procedures used for determining targets for “signature strikes”—attacks based on “producing packages of information that become icons for killable bodies on the basis of behavior analysis and a logic of preemption”¹—have resulted in hundreds of civilian casualties in drone strikes. The same risks apply to fully autonomous weapons. If weapons without meaningful human control are deployed on the battlefield or a policing situation, programmed to target and engage people on the basis of software and sensors, the risks of mistaken identity or unlawful engagement run high. It is not at all clear to tech workers, scientists, academics, or other experts that weaponized robots will be able to comply with international humanitarian law or other rules of engagement.²

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In addition to these concerns, there is also the risk of bias in those software and sensors. If we look at bias in programming algorithms, it’s easy to be concerned. Bias in terms of gender, race, socioeconomic status, ability, and sexual orientation can be programmed into machines, including

autonomous weapons. Facial recognition software struggles to recognize people of colour; voice recognition struggles to respond to women’s voices or non-North American accents; photos of anyone standing in a kitchen are labeled as women; people’s bail is denied because a program decided that a woman of colour was more likely to reoffend than a white woman.³ Imagine this kind of bias being programmed into a weapon system designed to target and fire upon targets without any meaningful human control, without any human judgment to counteract that bias. It’s not a pretty picture.

RAPE AND ROBOTS

Then there is the argument, raised by government officials and others who try to argue in favour of autonomous weapons, that one of their advantages is that they won’t rape. This is myth.⁴ Of course autonomous weapons can be programmed to rape. If we’re thinking of them as machines to be used to kill people or destroy infrastructure, we might not perceive this, but an autonomous weapon could be programmed to inflict terror on a population through rape. Sexual violence in conflict is ordered by states and by armed groups alike using human soldiers. An autonomous weapon, if programmed to rape, would not hesitate to do so.

It’s also important to consider the broader culture of rape in relation to weapons and war. Rape and sexual violence are used as weapons in conflict. The risk of this kind of violence is also heightened during and after conflict. War destabilizes communities and exacerbates already existing gender inequalities and oppression of women, queer folks, and others who do not conform to societies’ standards of gender norms.

Then there is the culture of rape embedded in weapons themselves. One nickname given to a drone by its operator, for example, is SkyRaper.⁵ This reflects the culture of domination that is a key component of violent masculinities. It also reinforces the institutionalization of rape as a tool of war. It helps the operators and developers of the weapon own the use of rape for domination and to defeat a target, while simultaneously participating in the normalization of rape as a larger systemic issue.⁶ It also is an overt sexualization of the nature of imperial violence: those operating weapons from far away deploy them unlawfully in other countries, penetrating their borders without their governments’ consent.⁷ Other weapons can be used the same way, of course. But with the use of drones and the possibility of autonomous weapons, such practices seem to have reached the level of official policy.

The imagery of rape and nonconsensual activities in this context is not an aberration. A culture of sexual violence—and subsequent immunity—is part of the culture of dominance and invulnerability that is part of the military’s purposeful development of violent masculinities and a “warrior ethos”.⁸ However, the idea that drones are invulnerable does not necessarily imply that those who operate them are. In contrast, the supposed invulnerability of drones is based on the dislocation of their operators from danger. The user is protected by distance from the subjects it is targeting with the drone. This separates the “warrior” from war, the body from the battlefield. This has important implications for violent masculinities.

AUTONOMOUS WEAPONS AND THE WARRIOR ETHOS

Mechanizing warfare and protecting the soldier from risk of bodily harm seems to be in contradiction to the ethos of violent masculinity. Engaging an “enemy” from a distance to which they cannot respond is like shooting someone in the back. It is the antithesis of methods of warfare that celebrate bravery, courage, and sacrifice. “The attempt to eradicate all direct reciprocity in any exposure to hostile violence transforms not only the material conduct of armed violence technically, tactically, and psychically, but also the traditional principles of a military ethos officially based on bravery and a sense of sacrifice,” argues Grégoire Chamayou in his text *A Theory of the Drone*. “Judged by the yardstick of such classical categories, a drone looks like the weapon of cowards.”⁹

WHAT DO AUTONOMOUS WEAPONS LOOK LIKE, IN THIS CONTEXT?

Arguably, they would complete the separation of body from battlefield. “One of the troubles with unmanned aerial vehicles is literally the peril of becoming ‘unmanned’ in every sense of the term,” argues Chamayou. Mary Manjikian suggests that “media portrayals of the new ‘technogeek warrior’ have noted that the men who command systems like Israel’s Iron Dome mobile anti-rocket interception system are not stereotypically male leaders.”¹⁰ But rather than accept this “emasculatation” of warriors, the military and its supporters are simply changing the goal posts.

Some media reports, based on the language of military officials, have come to laud technical

proficiency as a warrior skill. In terms of cyber security, soldiers are described as “cyberwarriors” by their commander; technical prowess is elevated to a militaristic skill. Meanwhile, “Profiles in sources like *Wired* reinforce the connection between technical prowess and masculinity through featuring pictures of the new ‘geek warriors’ in military gear, posing next to the weapons which they pilot remotely, along with statistics about their kill ratios.”¹¹

With autonomous weapons, perhaps the tech workers and software developers will soon be posing for photographs with the robots deployed into battle or to police the streets. Regardless, the power displayed through detached, mechanized violence inherent in autonomous weapons, coupled with the arguments that these weapons will not seek revenge, will not rape, and will reduce civilian casualties, do not undermine violent masculinities, but reinforce it. The warrior ethos of violent masculinity—unemotional, detached, serious, and rational—is protected.

Furthermore, while some may say that it is cowardly to send a machine in to kill rather than men, drones and autonomous weapons alike “project a predatory masculinity, a powerful and abusive machine that emasculates targeted men” (emphasis added).¹² As with the rape culture already reinforced and perpetuated by drones, autonomous weapons would arguably exacerbate the process of dehumanization in warfare that is essential to combat. An autonomous weapon, using algorithms and software to determine and engage targets, also goes even further in “emasculating” or dehumanizing the “enemy” than any previous weapon technology. A weapon operating without meaningful human control will rely on characteristics of objects to sense a target, including the objects’ infrared emissions,

shape, or biometric information. This reduces people to objects, undermining human dignity.¹³

It also, as scholar Lorraine Bayard de Volo points out, “invites and legitimates a masculine response.”¹⁴ Affected populations, viewing the perpetrators of drone strikes as a predatory male, are incentivized to adopt the masculine protector role in their communities, to fight back against the aggressor.

AUTONOMOUS GENDER-BASED VIOLENCE AND REINFORCING VIOLENT MASCULINITIES

This in turn reinforces conceptions and practices of violent masculinities, and can lead to gender-based violence against men. In conflict, civilian men are often targeted—or counted in casualty recordings—as militants only because they are men of a certain age. While men are not necessarily targeted solely because they are men, taking sex as a key signifier as identity and exacting harm on that basis constitutes gender-based violence. That is to say, if someone uses sex as a basis for assessing whether or not a person is targeted, or if an attack is allowed (are only men present?), or in determining the impact of an attack later (i.e. during casualty recording), then they are using the sex of that person not as the motivation for the attack but as a proxy for identifying militants, or “acceptable targets”. This is gender-based violence. This erodes the protection that civilians should be afforded in conflict and violates many human rights, including the right to life and due process.¹⁵

It also has broader implications in the reinforcement of gender norms, including violent masculinity. Assuming all military-age men to be potential or actual militants or combatants entrenches the idea that men are violent and thus targetable. This

devalues male life—it suggests men are relatively more expendable than women. It increases the vulnerability of men, exacerbating other risks adult civilian men face such as forced recruitment, arbitrary detention, and summary execution.¹⁶

More broadly, the reinforcement of gender norms through targeting men as militants works against the establishment and sustainment of a more equitable society. Framing men as the militants, as the protectors of their communities willing to take up arms, in turn reinforces notions of women as weak, as being in need of this protection. This continues to enable women’s exclusion from authoritative social and political roles. It also reinforces the binary between women and men as weak and strong, as passive and violent, and refuses to engage with other identities and experiences that do not conform to this binary. Reinforcing violent masculinities also reproduces the power asymmetries and gendered hierarchies that underpin many acts of gender-based violence against women, queer-identified people, or non-conforming men.

The damage doesn’t end there. Marking certain populations as threats simply because they are men of a certain age in a certain location or exhibiting behaviour deemed by algorithms to be suspicious has implications for the normalization and abstraction of violence. As Thomas Gregory explores, it ignores the people that are affected—their bodies and their embodied experiences. He asks what happens to the bodies of those who are targeted by remote warfare technologies. “What do their experiences tell us about the limitations of language for thinking about the pain and suffering caused in war? What does it mean when violence overshoots the more elementary goal of taking a life, dedicating itself to destroying the body as body?”¹⁷

While this may be the result of any use of force, with any weapon or technology, autonomous weapons, in unique ways, risk undermining human dignity; committing gender-based violence; reinforcing violent masculinities; further exacerbating cycles of violence and conflict and oppression of women and queer folks. The way that sensors and software will be used to disembody targets before physically disembodying the person with worse is significant. It points to an increasing remoteness and abstraction of violence, an execution of human beings by machines that, as autonomy and the use of algorithms are increased in the development and operation of weapons, is likely to lead to increasing civilian casualties and also to further erosion of the sense of value of human life when it pertains to “the other”.

The gendered culture of violent masculinities that surrounds the development of autonomous weapons, likely to be embedded within the technology and its use, will create new challenges for preventing violence, protecting civilians, and breaking down gender essentialisms or discrimination. Understanding how autonomous weapons are likely to be perceived in a gendered way by their developers, operators, and their victims is crucial to developing policies that can help break the cycle of violence. This could include

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an understanding that the operation of weapons without meaningful human control, weapons programmed to target and kill based on pre-programmed algorithms of who is considered to pose a threat, used without consent in foreign lands or in the streets of local cities, will result in civilian casualties, psychological harm, and destruction of civilian infrastructure. That this in turn will result in a violent masculine response from affected communities, reinforcing gender inequalities and oppressions.

Such understandings should have significant implications for our thinking about and approach to the development of autonomous weapons. Campaigners can think about how this kind of analysis and argumentation could help tech workers and policy experts see the need for meaningful human control over weapon systems. In a context where weapons are treated as tools of power, violence, and subordination of others, increasing the remoteness and abstraction of violence is not the answer. Dealing with violence and conflict as a social institution, rather than a technical challenge to be “solved” with new weapons technology, is imperative. Understanding the gender dimensions of both violence and technology could help campaigners engage with new audiences and contextualize our work against weapons in a broader context of gender justice.

ENDNOTES

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