



Gender and Lethal Autonomous Weapons Systems

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What Are LAWS?



While there is no agreed definition of Lethal Autonomous Weapons Systems (LAWS) yet, LAWS are broadly understood to refer to weapon systems that are designed to select and engage one or more targets without the need for human intervention after activation.



Autonomy in LAWS can be achieved in different ways, and rapid advances in the field of artificial intelligence (AI) and machine learning are setting the scene for a new generation of autonomous weapons systems in scale and scope.

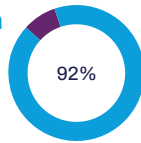


The Convention on Certain Conventional Weapons Group of Governmental Experts on LAWS (CCW GGE on LAWS) released [an overview of characterizations of these systems](#).

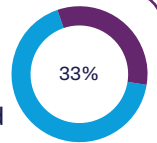
Gender Matters in LAWS



Male-Dominated Tech Workspaces: 92% of software professionals worldwide are men.



Gender Inequality in Diplomacy and Policy-making: Women represent only 1/3 of diplomats participating in arms control and disarmament meetings such as CCW GGE on LAWS.



Militarised Masculinities: Women form a minority of military personnel in most countries, ranging from 0.3% to 20%.



Biased Systems: A 2021 review of 133 AI systems employed across sectors shows that 44% exhibit gender bias and 26% exhibit both gender and racial biases.



The Problem of Bias

Societal norms can be implicitly encoded in LAWS, which can result in biases at the systems' output stage based on gender, race, age, and other demographic qualifiers.

Bias risks operational efficiency of AI systems and forms a pertinent issue in discussions around LAWS.

Biases in AI are usually a result of [any combination of 3 oversights](#):

- 1 Incorrect, incomplete or unrepresentative datasets;
- 2 Machine learning models which introduce, reinforce or exacerbate bias in the data; and
- 3 Human developers and operators who may encode their own biases or overlook pre-existing biases in the data, processing or output of the systems.

Evidence of bias in civilian applications of AI is easy to find. However, less research exists on how military applications of AI may reproduce inequalities.

Potential consequences of gender biases in military AI systems like LAWS can be assessed from [civilian examples of bias](#), such as:

- Popular facial recognition technologies [do not detect certain faces](#) due to their gender or race;
- Women were [not shortlisted](#) for jobs due to AI-based recruitment tools passing over women candidates in favour of men;
- Medical algorithms have been known to deny care to individuals based on [gender](#), [race](#) and [age](#).

Gender biases in LAWS and related systems [may result in misidentifying](#) women as non-human objects or miscategorizing civilian men as combatants.

There is no neutral category of a "human", hence military applications of AI need to be transparent about how these systems respond to and reflect the diversity of humanity.

The CCW GGE on LAWS is the sole intergovernmental forum where LAWS are discussed, and gender considerations have been addressed in various ways:

Initial discussions at the GGE (2017 & 2018) mentioned the importance of including gender perspectives and striving towards gender balance amongst the delegations at the CCW.

From 2019 onwards, the issue of biases, including gender and racial bias, in data-sets and algorithms became [a point of discussion](#) in the context of ethics and operational efficiency of LAWS.

Starting from 2021, gender biases were discussed as a subset of risk mitigation, which forms one of the [11 Guiding Principles on LAWS](#) agreed upon by all High Contracting Parties to the CCW by consensus.

In 2022 and 2023, gender biases remained on the agenda as a

consideration under ethics, legal reviews, risk mitigation and confidence-building measures, but were missing from the final documents produced by the GGE.

In 2024, a group of Member States released [a working paper](#) highlighting ways to address biases in autonomous weapons, an ongoing effort at the GGE that UNIDIR supported through [a side event](#) on fixing gender glitches in military AI.



Areas for Action

Technical Measures:

Identify and address biases in data and algorithms, Fund representative and gender-disaggregated datasets, Audit military AI systems to ensure bias mitigation.



Gender Parity:

Ensure meaningful representation of [women diplomats](#) as well as gender experts at all stages of policymaking concerning LAWS.



Gender-Sensitization Training:

Provide gender-sensitization training as part of the technical training to all personnel involved in the design, development and deployment of LAWS.



Research and Knowledge-Creation:

Fund and support research to comprehend the evolving gender-specific considerations on LAWS and utilize the findings to guide gender-sensitive policies.



Gender Reviews:

Conduct gender reviews of new and emerging military technologies like LAWS under regular national legal reviews of weapons systems.



International Cooperation:

Encourage international multistakeholder collaboration to tackle gender issues in AI and LAWS, especially by exchanging knowledge and best practices.



Capacity Building:

Support capacity building initiatives to enhance knowledge and expertise in gender considerations on LAWS and military AI, such as the [UNIDIR Women in AI Fellowship](#).



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