

ETHICAL STRUCTURES AND CONCERNS WITH AUTONOMOUS WEAPON SYSTEMS

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DEFINITIONS AND DRONES

A SYSTEM CAPABLE OF UNDERTAKING MULTIPLE AND DISTINCT TASKS WITHOUT COMMANDS IN EXCESS OF AN INITIAL TARGET PACKAGE, CAPABLE OF ADAPTING TO COMBAT CONDITIONS, AND MAKING ITS OWN TARGETING DECISIONS

DOES NOT INCLUDE CRUISE MISSILES, BALLISTIC MISSILES, AND GLIDE VEHICLES

DOES NOT INCLUDE CONTEMPORARY UNMANNED AIR VEHICLES, AS THESE REQUIRE HUMAN INPUT TO FIRE WEAPONS AND CANNOT NATIVELY IDENTIFY AND ENGAGE TARGETS

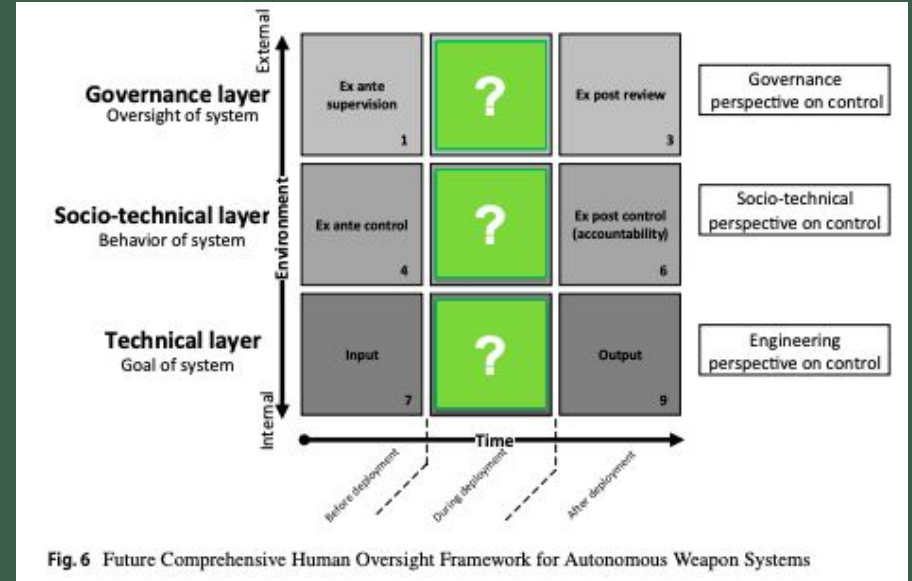
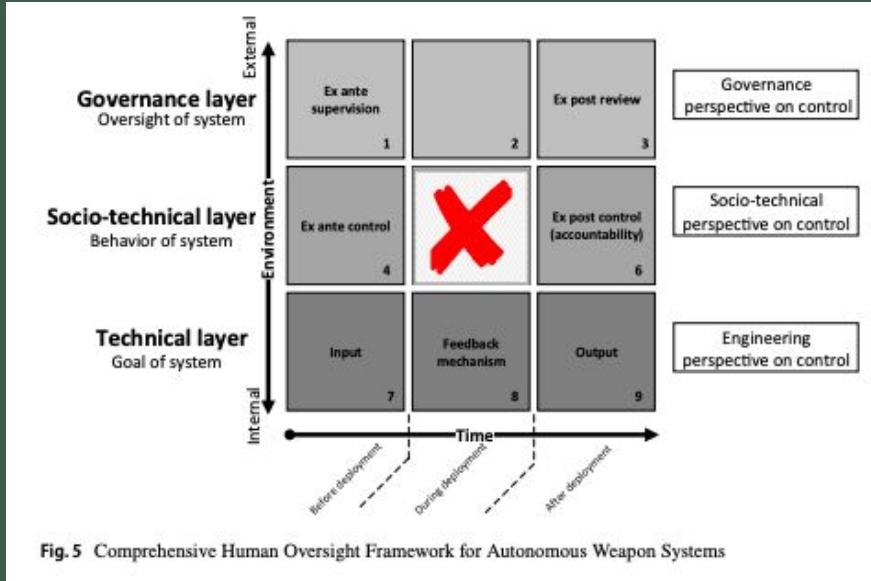


AWS ARE COMING

- New technologies provoke moral quandary
- They are still adopted when they give an advantage
- AWS will become operationally superior to alternatives - all secure investment and development
 - Sustains higher G forces
 - Significantly cheaper
 - Lower operational costs
 - Processes and communicates data more efficiently
 - No risk of human resource loss
- Lancet-3s ostensibly have human-off-the-loop capacity



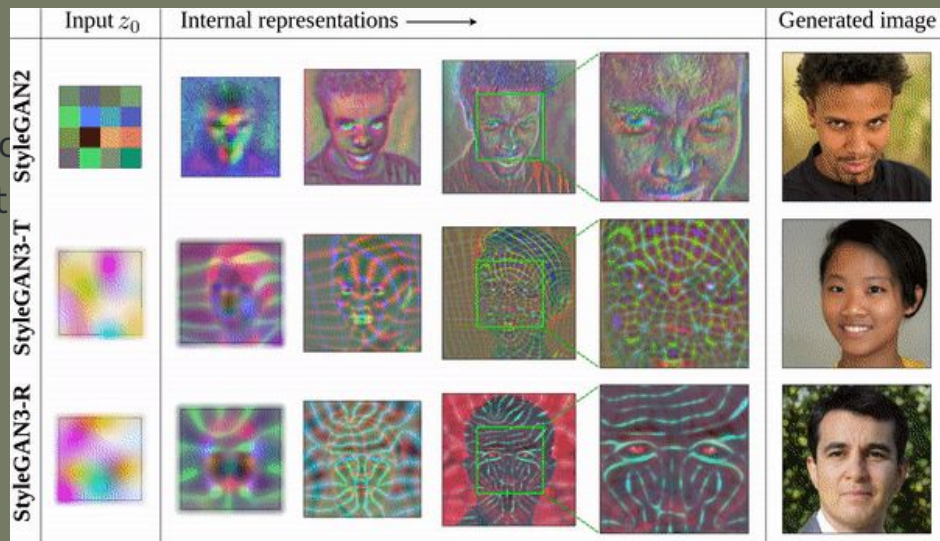
ACCOUNTABILITY GAPS



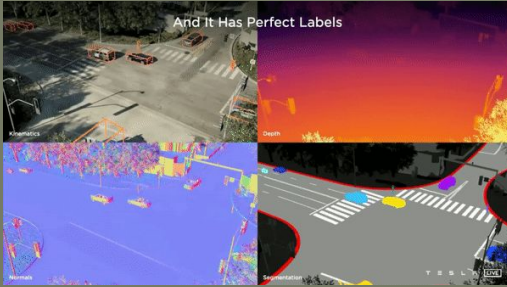
Verdiesen et. al. (2021)

EPISTEMOLOGICAL & DEONTOLOGICAL CONCERNS

- **Epistemologically**, we lack reliable, scientific evidence regarding the accuracy of machine perception and discrimination abilities
 - Humans do not understand the black box statistical learning models of AI to trust their autonomous decisions in unstructured combat
- **Deontologically**, AWS breaches the international human rights framework
 - Difficulty in defining AWS autonomy



POSSIBLE SOLUTIONS



Technical

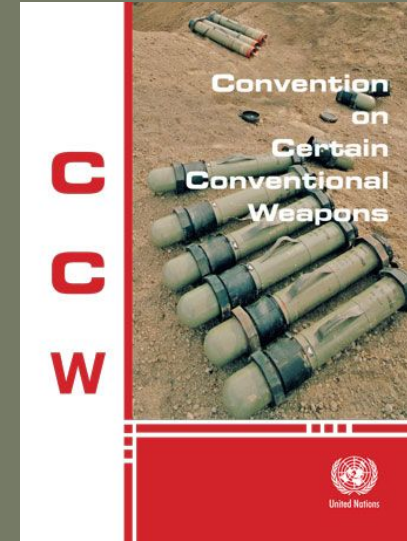
High-Fidelity Simulation



Federal Aviation
Administration

Socio-technical

Distributed
Accountability



Governance

Legislation
Inviting Public Discourse

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