#### TAKING STOCK OF AWS

# AND MILITARY ROBOTICS PROLIFERATION

AWS COLLOQUIUM- ROYAL HIGHER INSTITUTE FOR DEFENCE

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# OUTLINE

AUTONOMY AND ROBOTICS

ROBOTIC LETHAL AND NON-LETHAL

SYSTEMS

AI IN MILITARY DECISION-MAKING

RISKS AND CHALLENGES





# SOME PROBLEMS IN THE DEBATE ABOUT AWS

- Lack of definition and characterization of LAWS
- Presence of different systems with different 'switch-modes'
- Difficult to measure autonomy
- Focus on possible future applications



#### AUTONOMY AND ROBOTICS

- AI can have software and physical applications. However, AI is not the only way to autonomy.
- LAWS would represent the so-called 'autonomy in motion', opposed to 'autonomy at rest'.
- Forms of autonomy in motion are generally considered riskier than autonomy at rest.

#### USE OF ROBOTIC LETHAL AND NON -LETHAL SYSTEMS







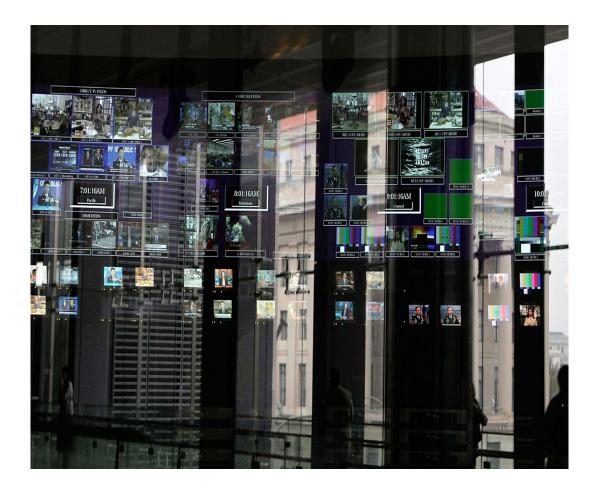
#### APPLICATIONS

- ISR
  - Uncrewed systems
    - ScanEagle; MQ-4C Triton
- Target identification, selection, or engagement
  - Air defence systems
    - Phalanx; Goalkeeper
  - Active protection systems
    - Afghanit; Rheinmetall Active Defence System
  - Loitering munitions & Guided Munitions
    - Harpy; Harop

# AI IN MILITARY DECISION-MAKING

#### APPLICATIONS

- Intelligence
  - Filter and triage material
  - Assist in the analysis of raw data
- Best course of Action
  - Providing advice
  - Building pattern-of-life analysis
  - Predicting future events
  - Example: ATLAS

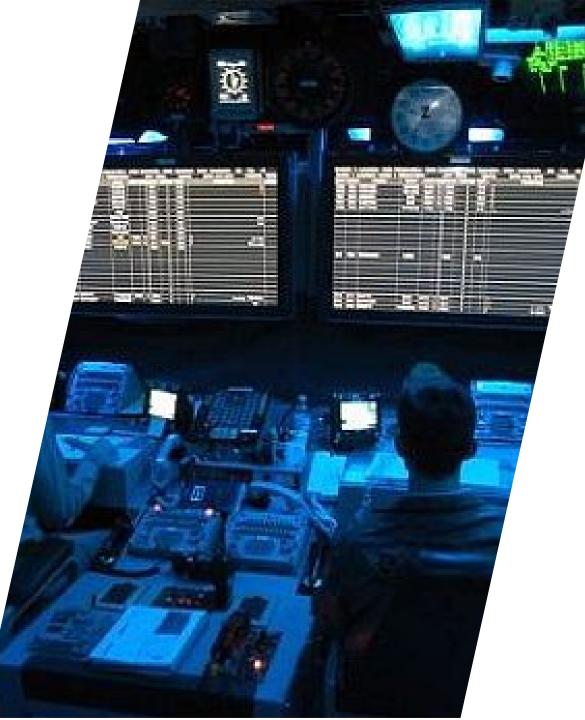


## RISKS & CHALLENGES

PREDICTABILITY & UNDERSTANDABILITY

### MALICIOUS ATTACKS

#### AUTOMATIZATION OF WARFARE



# FINAL THOUGHTS

- The focus on defining what AWS are diverts attention from existing uses
- Existing uses of military AI already present significant challenges
- The gradual automatization of warfare is progressively removing humans from decision-making

#### THANK YOU!





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