

A dark background with a faint, glowing network diagram of interconnected nodes and lines, suggesting a digital or military network.

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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