



# Cyber Norms

## A Missing Link in the Autonomous Weapons Debate

For UNIDIR, United Nations HQ | 9 October 2015

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*"Oh, are you attacking from home today?"*

# « *Autonomous cyberweapons* »



- Some cyberattacks can be **autonomous** and cause physical damage, incl. death
- By **definition**, these are autonomous weapons
- But...



# Department of Defense **DIRECTIVE**

**NUMBER 3000.09**  
November 21, 2012

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USD(P)

**SUBJECT:** Autonomy in Weapon Systems

**References:** See Enclosure 1

1. PURPOSE. This Directive:

a. Establishes DoD policy and assigns responsibilities for the development and use of autonomous and semi-autonomous functions in weapon systems, including manned and unmanned platforms.

b. Establishes guidelines designed to minimize the probability and consequences of failures in autonomous and semi-autonomous weapon systems that could lead to unintended engagements.

2. APPLICABILITY. This Directive:

...  
...  
...

b. Does not apply to autonomous or semi-autonomous cyberspace systems for cyberspace operations; unarmed, unmanned platforms; unguided munitions; munitions manually guided by the operator (e.g., laser- or wire-guided munitions); mines; or unexploded explosive ordnance.

# « *Missing link* »



- Debate on autonomous weapons systems (AWS) is **incomplete** without cyber

# Challenges

# « *Conceptual* »



- Use of force
- Sovereignty / territory
- Critical infrastructure
- Competing narratives

# « *Laws of armed conflict* »



- Attribution
- Distinction
- Perfidy
- Civilians
- Proportionality



# « Ethics »



- Lasting peace
- Instant proliferation
- Meaningful human control

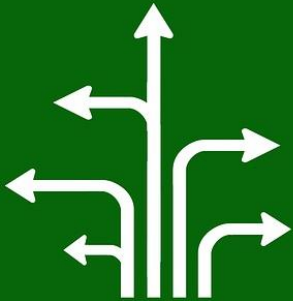
# Comparing norms

# « *Parallels* »



- LOAC, HRL, etc. still apply
- Unpredictability in autonomous systems

# « *Divergences* »



- Different transparency demands
- Physical vs. virtual/information worlds
- Espionage norms

**Meaningful  
human control**

# « *Why the disconnect?* »



- Not inherently lethal, only indirectly
- But MHC “requirement” should apply to the entire range of harms

## « *Possible gaps in MHC claim* »



- Responsibility
- Human dignity
- Respect for adversaries

# « *Cyber has bigger problems* »



- Basic attribution and discrimination
- Other general problems afflicting cyber



**Closing thought**

# « *A double challenge* »



- Problems with cyber more generally
- Problems with autonomous weapons

# « *Playing catch-up* »



**Dangerous **gap** between law  
and norms & technological  
capabilities**

# « Acknowledgements »

- This work is supported by:
  - **Cal Poly**, College of Liberal Arts and Philosophy Dept.
  - **US National Science Foundation**
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## « *Contact* »

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