



The Manual on International Law applicable to Air and Missile Warfare: Still relevant today?

■ The Manual on International Law applicable to Air and Missile Warfare

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Throwback to a couple of hours ago...

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■ Throwback to a couple of hours ago...

- The nature or essence of the Harvard Manual: restating existing law
- It doesn't cover every scenario: if not addressed, general principles apply

So, does the Harvard Manual cover the issues addressed today with regards to the use of LAWs an/or AI (or other emerging technologies) during a conflict? And if not, has the Manual (partially) lost its relevance?



Observations

- The Black-letter Rules don't explicitly mention LAWs and/or AI.
- Harvard Manual is 'technology-neutral' towards means and methods of warfare.
- But plenty of provisions refer to the general principles that apply, such as (but not limited to) distinction, proportionality, legitimate military objectives, precautions in attack, etc...
- Although no mention of LAWs and/or AI, Rule 7 states:

“The use of any weapon not expressly mentioned under this Section of the Manual is subject to the general rules and principles of customary and treaty law of international armed conflict (in particular the principle of distinction and the prohibition of unnecessary suffering), as well as to any other treaty law applicable for Contracting Parties.”



Observations

- Some examples of references to LAWs and/or AI in the Commentary

- On Rule 17 (a):

*UCAVs (see definition in Rule 1 (ee)), whether remotely piloted or acting **autonomously**, may engage in attacks as long as they qualify as military aircraft. **Autonomous** action means that the unmanned aircraft has sensors and an onboard data processing capability to make decisions to attack according to a computer program. The sensors and **computer programs must be able to distinguish** between military objectives and civilian objects, as well as between civilians and combatants.*

- On Rule 39:

*4. In case of **autonomous** systems, the UCAV must only be programmed to engage potential targets based on **reliable information** that they are **lawful targets**. The performance of the sensors and **the program identifying lawful targets** must be comparable to that of manned aircraft or to that of remotely piloted (i.e. non-autonomous) UCAVs.*

5. The standards set forth in Rule 12 regarding doubt apply equally to UCAV attacks, whether autonomous or manned.

- On Rule 1 (x) – Definition of “Military Aircraft”

*6. The requirement of a crew under military discipline does not mean that all military aircraft must be manned by a crew. Today, UAVs as well as UCAVs also qualify as military aircraft, if the persons remotely controlling them are subject to regular armed forces discipline. The same holds true for **autonomously operating UAVs, provided that their programming has been executed by individuals subject to regular armed forces control.***



Observations

- Has any new treaty law or International Customary Law within the Air and Missile Warfare domain been adopted (or agreed upon) since 2009?
- Have new or emerging technologies altered the *opinio juris* of the Group of Experts or contributing nations to the Harvard Manual?

Codification and progressive development of international humanitarian law

A unique and important character of the CCW is its ability to address emerging weapons issues and the possibility for negotiating new protocols. As per Article 8 (2)(a) of the Convention, at any time after the entry into force of this Convention any High Contracting Party may propose additional protocols relating to other categories of conventional weapons not covered by the existing annexed Protocols.

Currently under discussion at the CCW is the issue of lethal autonomous weapons systems (LAWS). Since 2017, the CCW High Contracting Parties have been examining possible challenges posed by emerging technologies in the area of LAWS through a Group of Governmental Experts (GGE). In 2018 and 2019, the Group identified and adopted eleven principles to guide future work of the Group, reaffirming the relevance of international humanitarian law to such technologies.

- See also [‘Milestones in the Global Legal Framework for Autonomous Weapons’](#)



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Conclusions

- **Is the Harvard Manual still relevant today?**
 - Technical neutrality in the wording of the Rules and the commentaries with regards to means and methods of warfare makes it “future-proof” to a large extent;
 - Although LAWs and/or AI are recent (and not fully developed) capabilities, their use during Air Ops needs to comply with IHL.
- **Should the Harvard Manual be amended/reviewed in order to (explicitly) include emerging technologies (as LAWs, AI, others)?**
 - The Manual is a restatement of existing law. If underlying treaties, like the Convention on Certain Conventional Weapons (CCW) – Draft Protocol VI, were to be reviewed, or Customary International Law was to be agreed upon, these changes could be added to the Manual.



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■ Questions