

Modern Technologies and Conflicts

AI and autonomy at war

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Some basics

what is intelligence and consciousness?

types of AI?

- strong/general AI

vs

weak/narrow AI

what about physical form?



History of autonomy

mechanical automata since middle ages

- Digesting Duck, Leonardo's mechanical knight, [Karakuri](#)

biological automata since 19th cent.

- Frankenstein, R.U.R.

accelerated progression after WW2

- Turing, von Neumann, Minsky, ...

exponential since 90s



History of autonomy in warfare

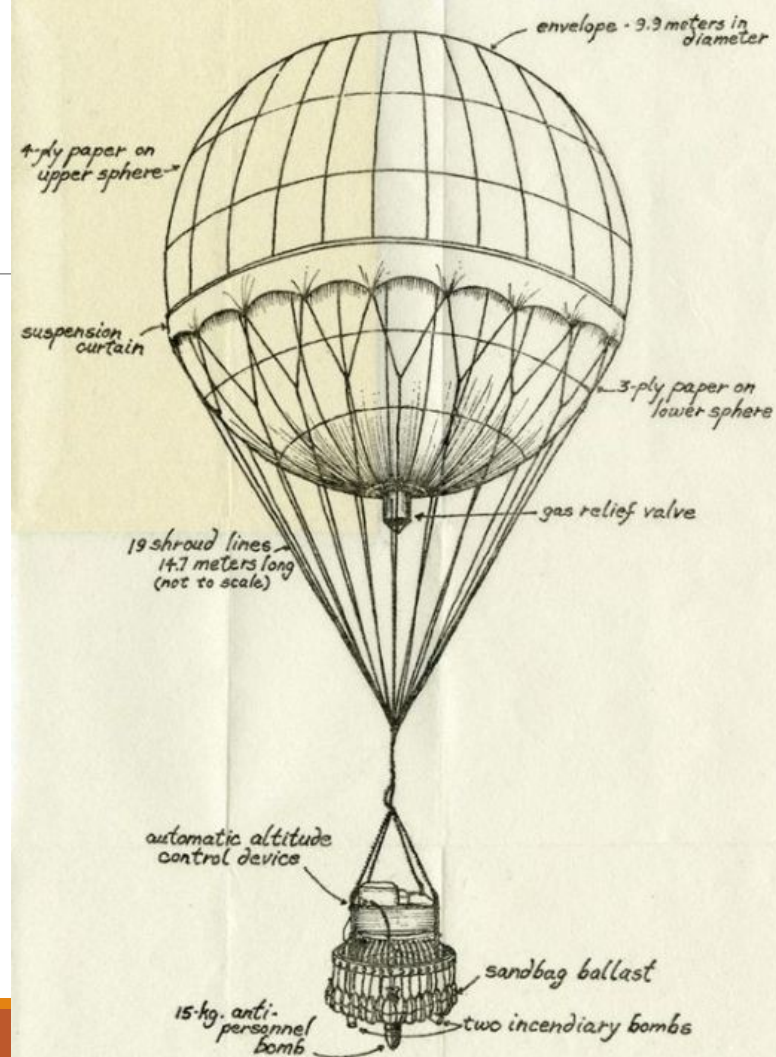
before WW1: hot-air balloons

- observation and bombing

interwar: aerial practice targets

during WW2: remote control of all types

- both wired and wireless
- air, land and sea -based
- V1 and V2?





and <https://www.youtube.com/watch?v=z1csDqNO8FY>

Cold War

target practice, decoys and reconnaissance

- with jet engines too

modern era of drones/UAVs began during the 80s, in the Middle East



Present

remote control is commonplace

growing autonomy

- locomotion a sensors

„human in the loop“ principle

still not true intelligence

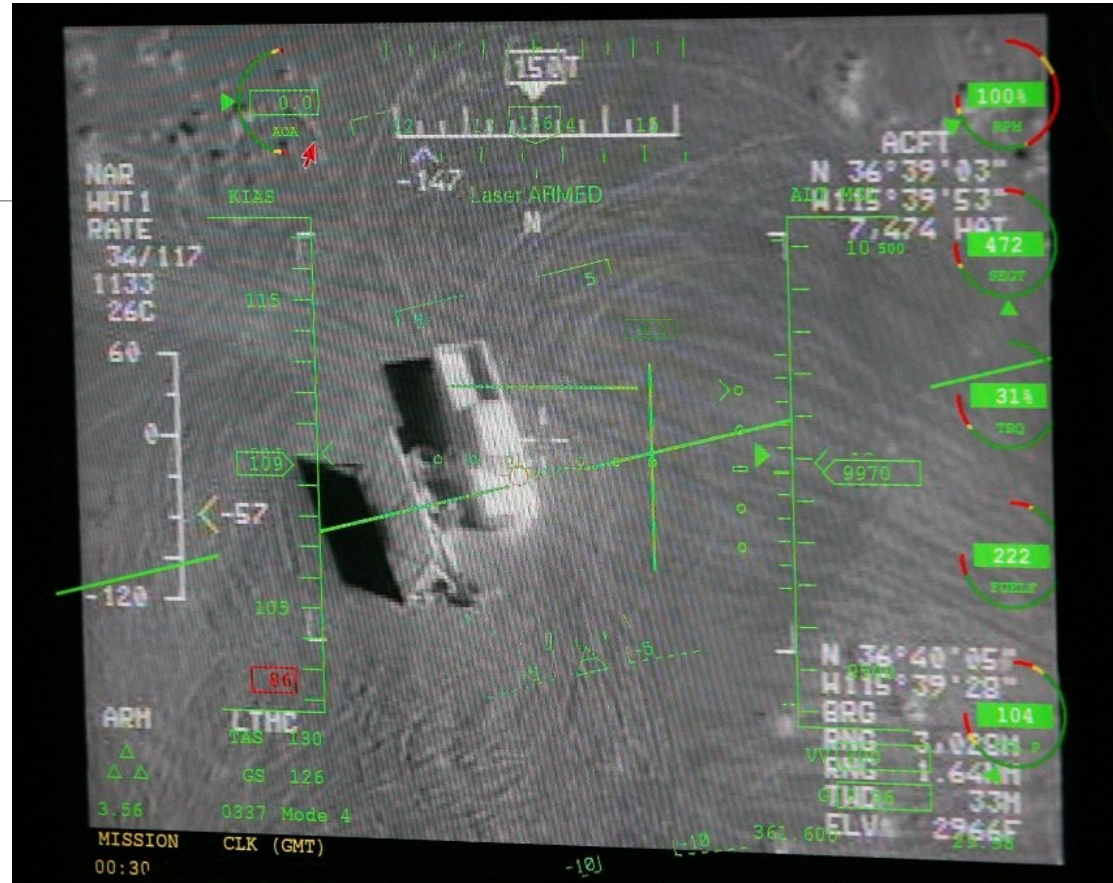






Problems?

- lower conflict-threshold
- collateral damage
- „gamification“
- dehumanization
- psychological impacts
- political and cultural fallout



Non-state actors

terrorists, guerillas etc.

- reconnaissance, targeting, smuggling
- direct attacks

commercial drones are cheap,
available and easily modified

perfect example of horizontal
proliferation of dual-use tech





Near future

growing autonomy across the board
closer integration and mixed units
autonomous swarms

first autonomous kill?
arrival of true AI?

