Modern Technologies and Conflicts

AI and autonomy at war

JAKUB DRMOLA

Some basics

what is intelligence and consciousness?

unmanned/autonomy/AI?

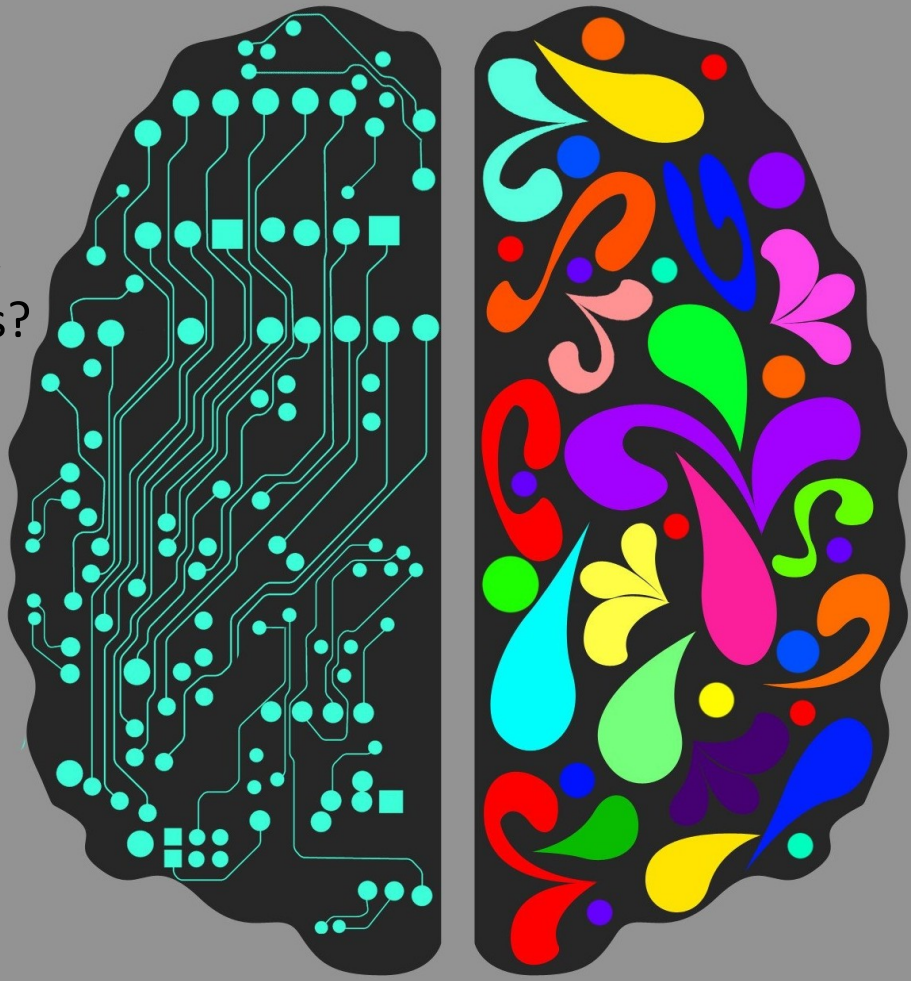
types of AI?

- 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

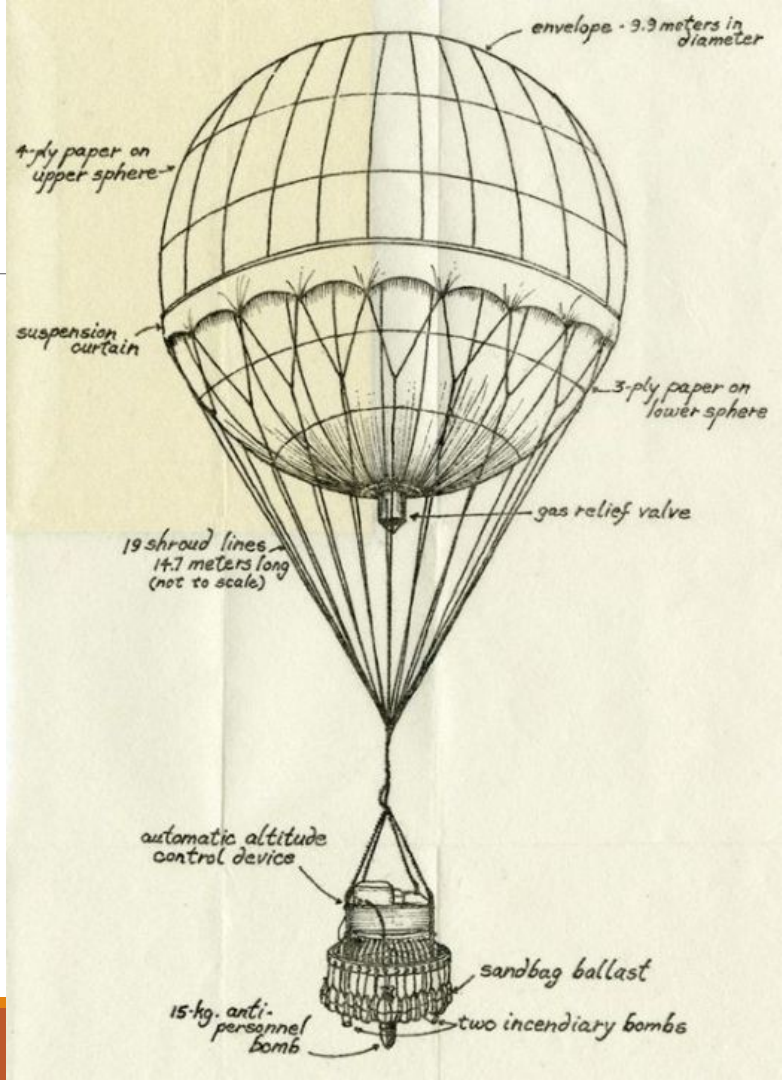
before WW1: hot-air balloons

- observation and bombing

interwar: aerial practice targets

during WW2: remote control of all types

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



and https://www.youtube.com/watch?v=I_dr0arBltU

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

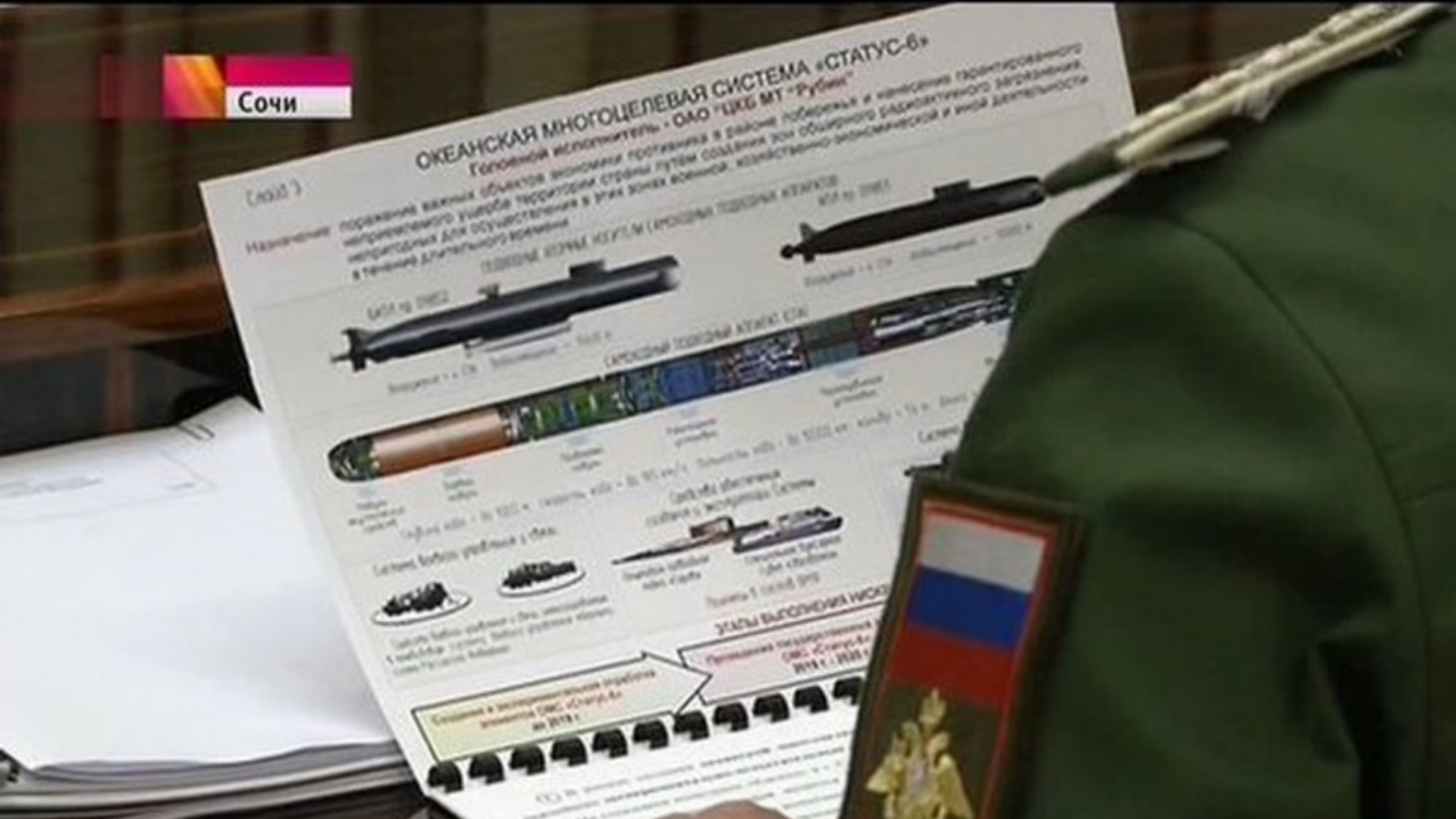
„human in the loop“ principle

fire-and-forget systems

still not true intelligence

https://www.youtube.com/watch?v=kw3m7bqrQ64


smitsmitty.livejournal.com


Сочи
ОКЕАНСКАЯ МНОГОЦЕЛЕВАЯ СИСТЕМА «СТАТУС-6»

Problems?

lower conflict-threshold

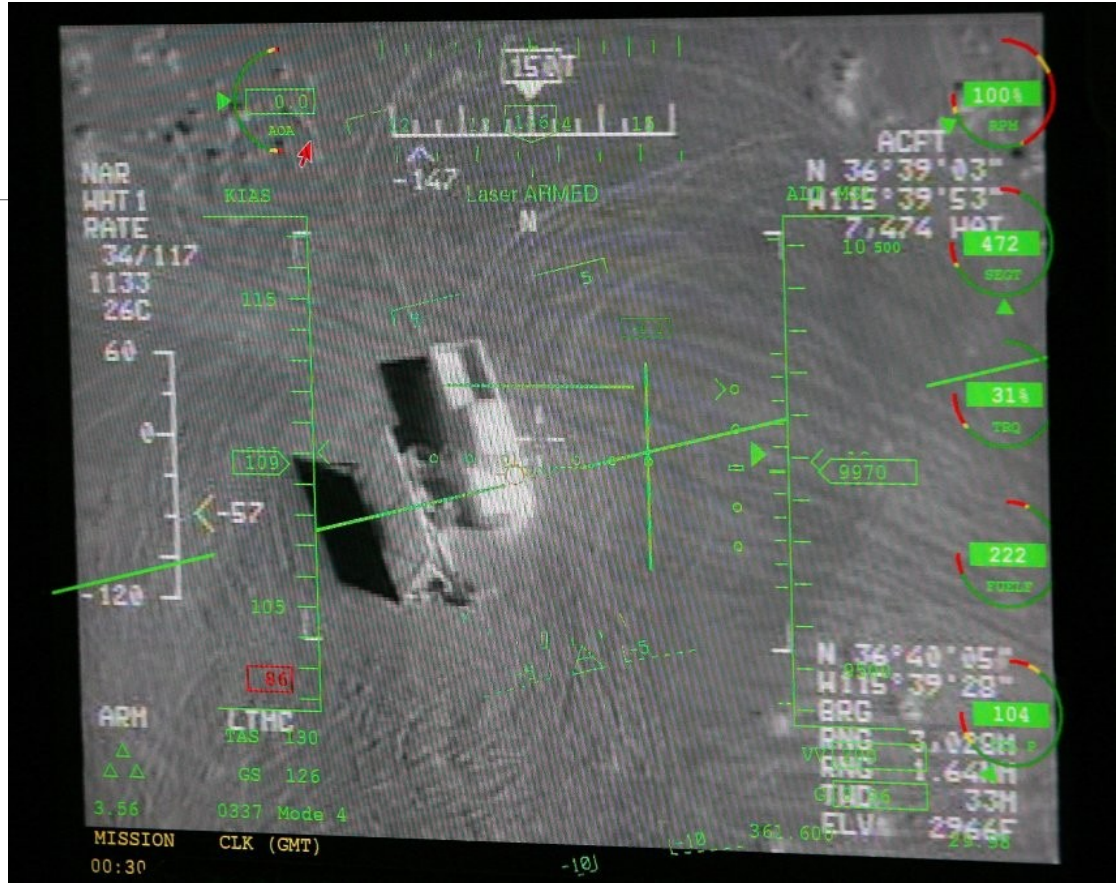
collateral damage

„gamification“

dehumanization

psychological impacts

political and cultural fallout



Non-state actors

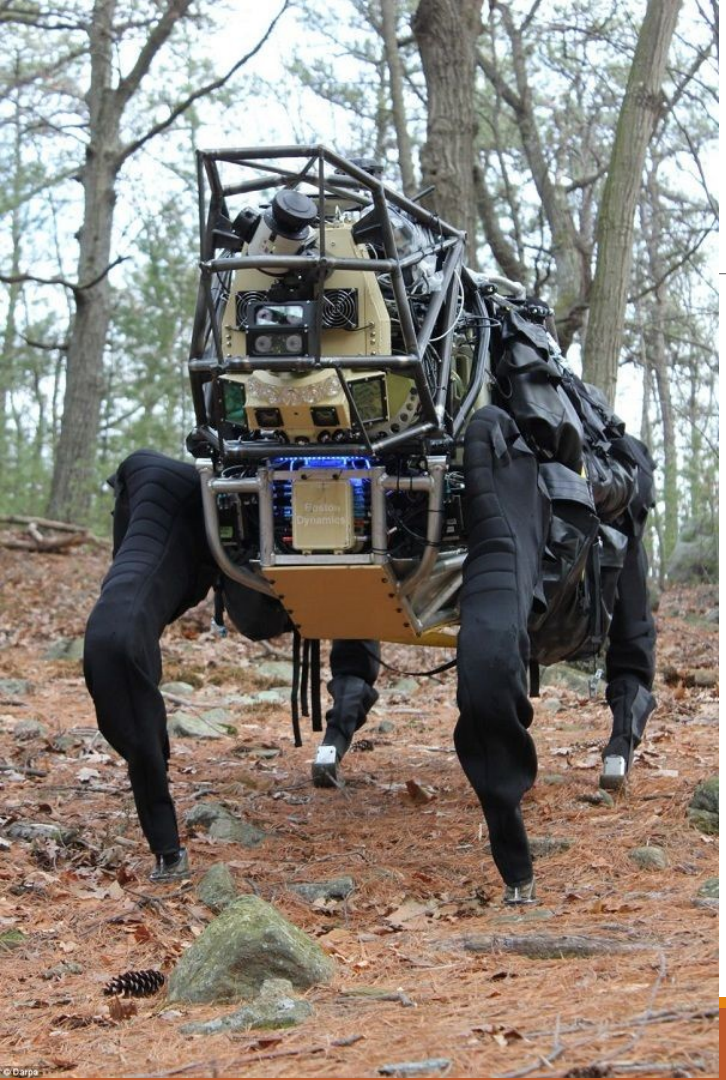
terrorists, guerillas etc.

- reconnaissance, targeting, smuggling
- direct attacks

commercial drones are cheap, available and easily modified

perfect example of horizontal proliferation of dual-use tech

http://www.mirror.co.uk/news/world-news/isis-using-increasingly-unconventional-weapons-9928395



Near future

growing autonomy across the board

- https://www.youtube.com/watch?v=h449oIjg2kY

closer integration and mixed units

autonomous swarms

first autonomous kill?

arrival of true AI?

https://www.youtube.com/watch?v=HTPIED6jUdU