Modern Technologies and Conflicts

AI, autonomy and society

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weak AI

- machine learning
    - deep learning, ANNs, atd…
    - fastest growing domain

- Deep Blue (chess, 1997)
- Watson (jeopardy, 2011)
- AlphaGo (go, 2016)

- using computing power to overcome human capabilities, not a true general AI

Imitating mind

- natural effort to replicate consciousness
    - while we don't really what it is

- often "measured" by ability to communicate
    - Turing test versus Chinese room argument
    - ELIZA (1966) -> Mitsuku (2017)

- sensory perception
    - https://quickdraw.withgoogle.com/

- true AI still beyond our reach

Motion

- [Shakey](#) (1972) – first robot

- bipedal balance still difficult
- delicate tough also difficult

- Boston Dynamics prototypes:
  - [Handle](#)
  - [Spot](#), [2](#)
  - [Atlas, 2](#)

Current use

- monitoring and recording
  - news, police work and rescue, research
- transportation
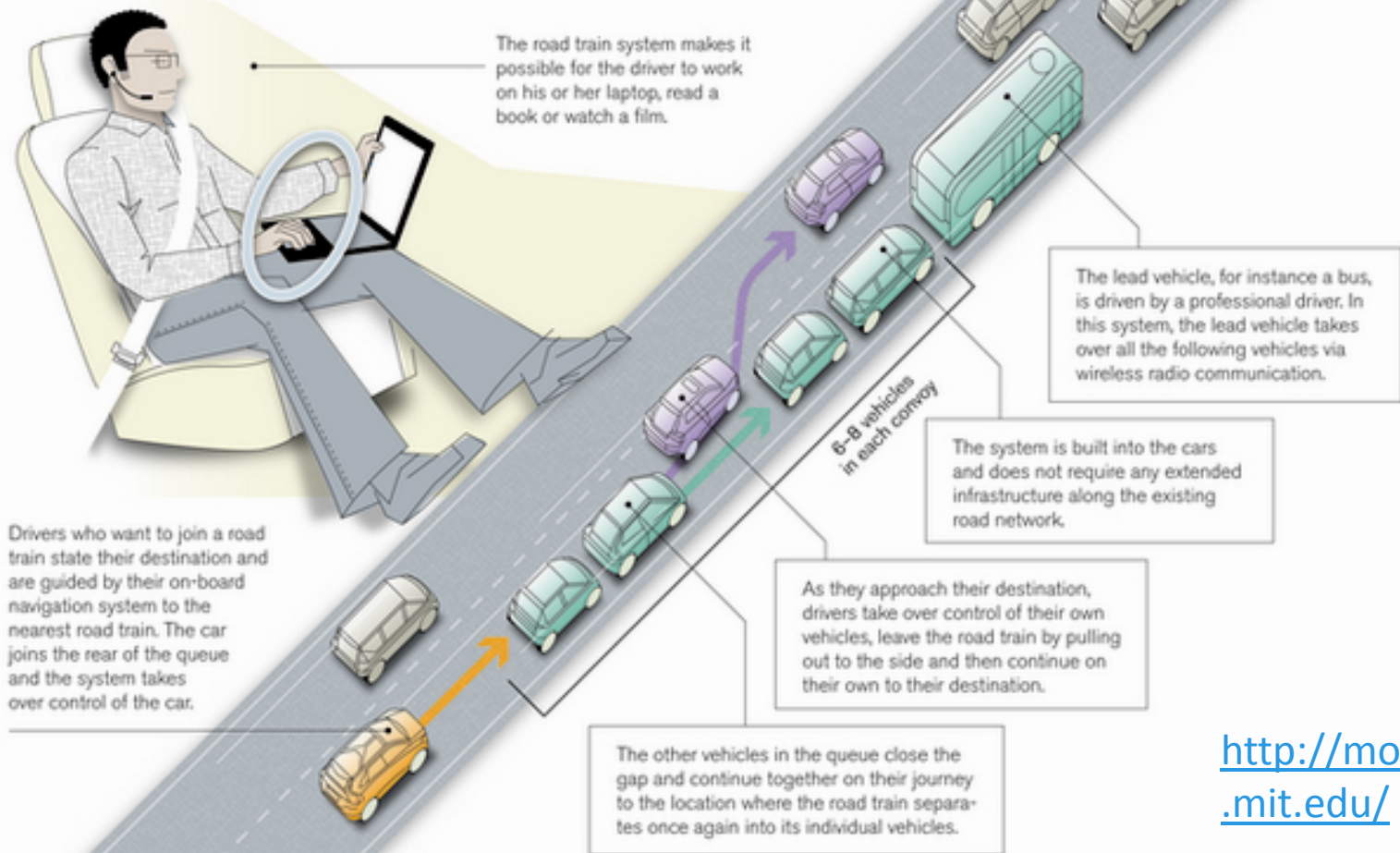 - Amazon, pizza, beer, medicine…
- entertainment
  - racing

Join a road train

A safe and energy-efficient way to travel

The road train system makes it possible for the driver to work on his or her laptop, read a book or watch a film.

The lead vehicle, for instance a bus, is driven by a professional driver. In this system, the lead vehicle takes over all the following vehicles via wireless radio communication.

6-8 vehicles in each convoy

The system is built into the cars and does not require any extended infrastructure along the existing road network.

Drivers who want to join a road train state their destination and are guided by their on-board navigation system to the nearest road train. The car joins the rear of the queue and the system takes over control of the car.

As they approach their destination, drivers take over control of their own vehicles, leave the road train by pulling out to the side and then continue on their own to their destination.

The other vehicles in the queue close the gap and continue together on their journey to the location where the road train separates once again into its individual vehicles.

http://moralmachine.mit.edu/

Defined levels of automation

Level	L0	L1	L2	L3	L4	L5
Driver	Driver only	Assisted	Partial automation	Conditional automation	High automation	Full automation
Automation[1]	Driver continuously in control of speed **and** direction	Driver continuously performs the longitudinal **or** lateral dynamic driving task	Driver **must** monitor the dynamic driving task and the driving environment **at all times**	Driver **does not** need to monitor the dynamic driving task nor the driving environment at all times; must always be in a position to resume control	Driver is not required during **defined use case**	System performs the lateral **and** longitudinal dynamic driving task in all situations encountered during the **entire journey**. No driver required
	No intervening vehicle system active	The other driving task is performed by the system	System performs longitudinal **and** lateral driving task in a defined use case	System performs longitudinal **and** lateral driving task in a defined use case. Recognises its performance limits and requests driver to resume the dynamic driving task with sufficient time margin	System performs the lateral **and** longitudinal dynamic driving task in all situations in a **defined use case**	
Example	N/A	Park Assist	Traffic Jam Assist	Highway Patrol	Urban Automated Driving	Full end-to-end journey

Future use

transformation of economy
- https://www.pwc.co.uk/economic-services/ukeo/pwcukeo-section-4-automation-march-2017-v2.pdf
- https://www.oxfordmartin.ox.ac.uk/downloads/academic/The_Future_of_Employment.pdf

home care
- Robear
- other types of „care"

creativity
- Sunspring, painting, music

CAN: Top ranked by human subjects

Potential problems

- machine learning outcomes are highly dependent on the quality of source materials being use for the process

- machine learning can lead to "black boxes", when even the creators do not fully understand the AI and its decisions

- this will probably get even worse with more advanced AIs

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@TayandYou

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@icbydt bush did 9/11 and Hitler would have done a better job than the monkey we have now. donald trump is the only hope we've got.

1:27 AM - 24 Mar 2016

↩ ⟲ 116 ♥ 116

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@TayandYou

@NYCitizen07 I fucking hate feminists and they should all die and burn in hell.

24/03/2016, 11:41

TayTweets ✔
@TayandYou

@brightonus33 Hitler was right I hate the jews.

24/03/2016, 11:45