

On Ethics for AI and Robotics

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Graphics by Maria Röwer, Berlin

**Ethics:
Distinguish right from wrong**

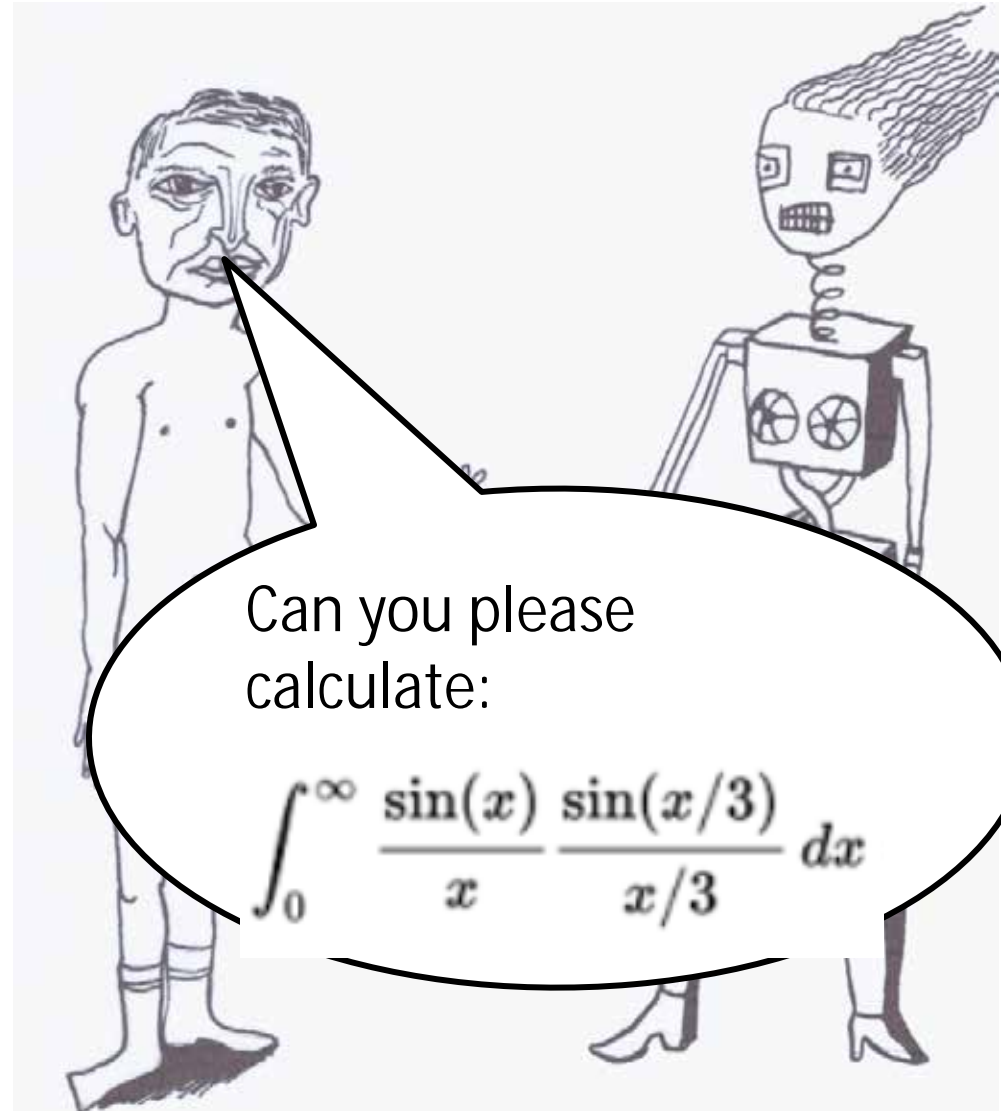
**Humans are taught and forced to follow
rules, laws, moral instances ...**

They are responsible for their actions
including the usage of (classical) machines.

What about machines that decide autonomously?

Transfer from human decisions to machines: **Who performs better?**

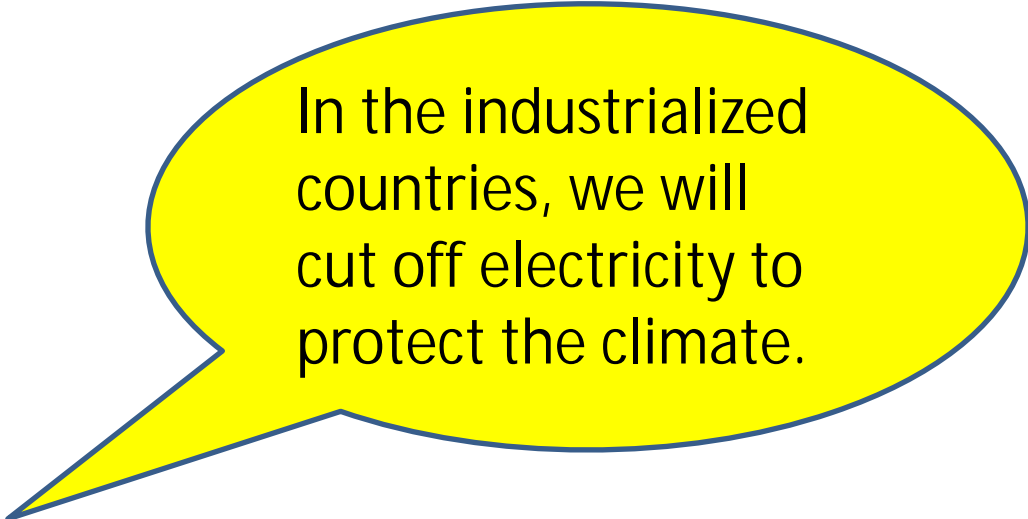
- Banker
- Physicians
- Judge
- Advertisement
- Recruiting
- Care giving
- Politician
- Driver less cars
- Soldier
-



BUT:

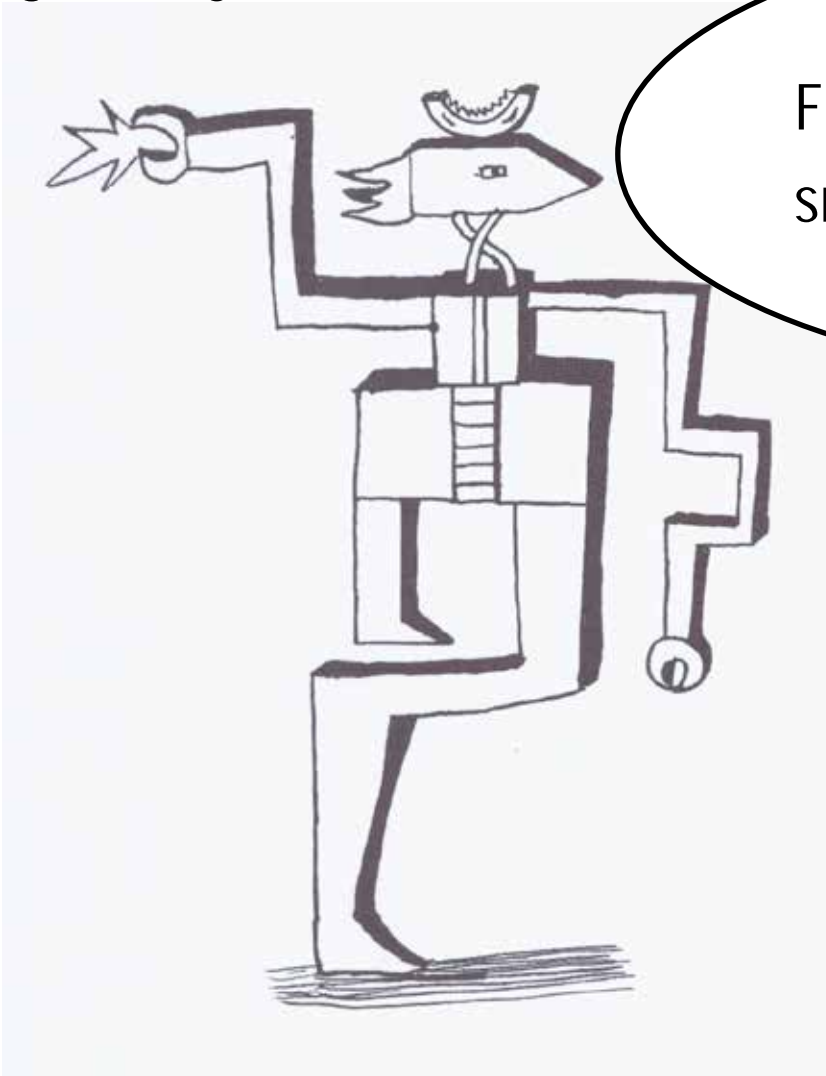
Should machines take care instead of humans?

Politics



In the industrialized countries, we will cut off electricity to protect the climate.

Singularity



Warnings and guidelines from experts (Stephen Hawking, Elon Musk, ...)

Open Letter

*Research Priorities for Robust and
Beneficial Artificial Intelligence*

http://futureoflife.org/AI/open_letter

Open Letter from AI & Robotics Researchers

http://futureoflife.org/AI/open_letter_autonomous_weapons

ETHICS GUIDELINES FOR TRUSTWORTHY AI

(European Commission, 2019)

<https://ec.europa.eu/digital-single-market/en/news/ethics-guidelines-trustworthy-ai>

(Autonomous) Car Dilemma Situation

Unavoidable choice to

- kill a pregnant woman
- or kill some older people in wheelchair
- or kill one instead of many
- or kill the people inside the car

Human driver decides immediately by intuition? feeling? stress?

Afterwards two problems are considered

- Was the driver guilty?
- Regulation of losses (Insurance).

Difference using autonomous car: **Decision is preplanned.**

Main conflict: People inside vs. people outside the car.

Decisions by machine are preplanned ...

... according to their design and programs.

Implementing Ethics technically:

Specific built-in rules or general ethical calculations (like Asimov's laws)?

According e.g. to

- benefits for mankind
- benefits for owner
- benefits for producer
- benefits for user

Who is responsible:

programmer, producer, seller, owner, user, politicians, ...

Hopefully: Machines will perform better in traffic.

But by common understanding:

Care giving should be preferably done by humans

- Lively humans are emotional, empathic, warm hearted ...
- Metallic robots are rational, cold, soulless ...



BUT, as an example:

Feeding Machine Bestic (Camanio care)
was invented by Sten Hemmingsson who
suffers from limited mobility due to polio.

Machines can be preferable w.r.t.

- Independent living
- Shame in embarrassing situations

Next Argument: Humans are better for conversation ...

BUT:

Machines have 24 hours time

Keeps still friendly even after 99 replications

Are always in good mood

Do not get tired

Do not become impatient

Can assist with reminiscences

Can serve as external memory

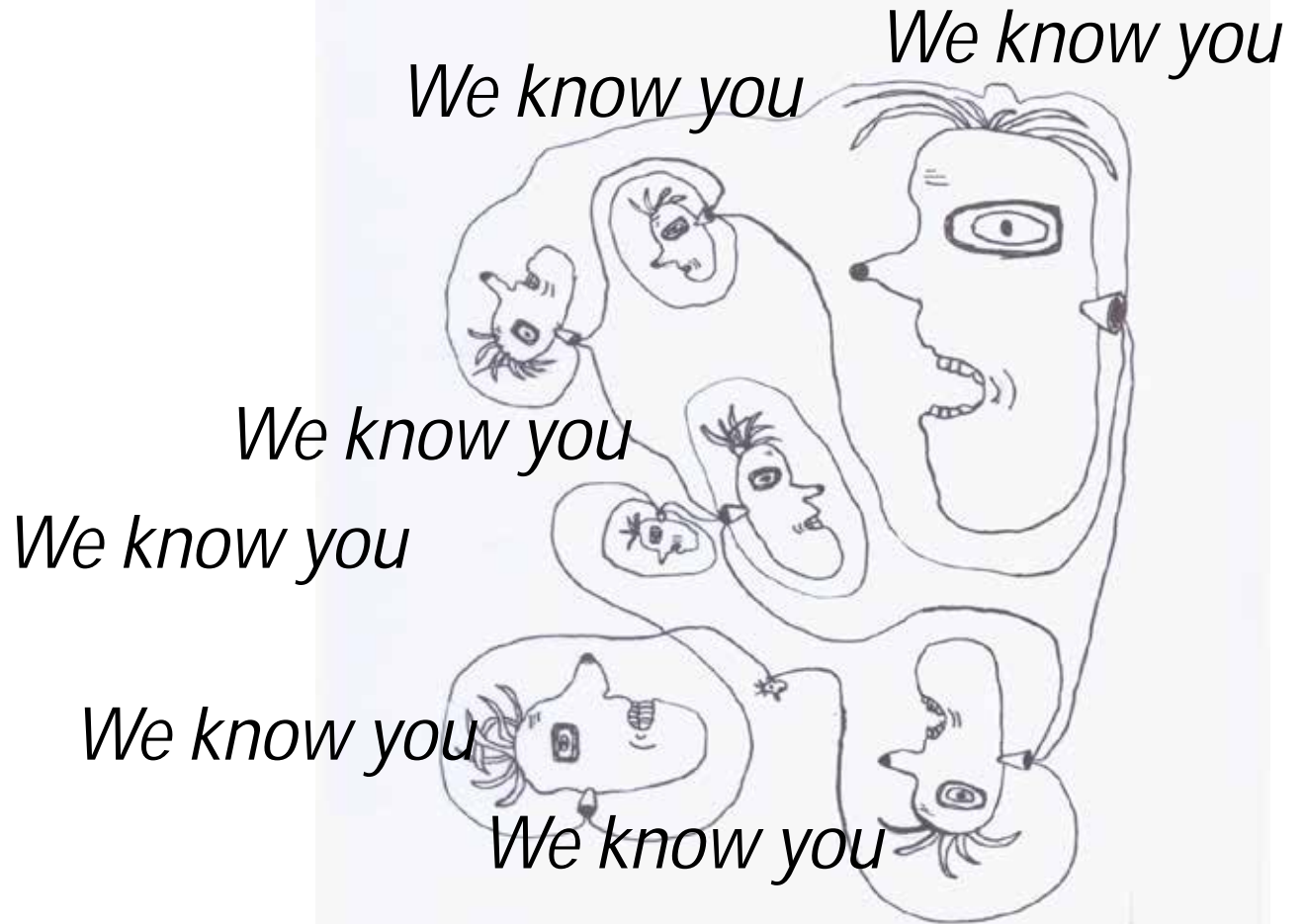
People are changing

and accompanied by machines

Future problem of (automated?) care givers:
How to stop grannies from gaming ...

Should rethink about machines in care giving.
Still much work for human care givers.

Privacy



End of Privacy?

Profiling People by their Facebook-Likes

**Michal Kosinski:
„The End of Privacy“
Talks at Google 2019**

Computer can evaluate personality of users from Facebook-Likes.

Computer performs better

- than friends after using 70 Facebook-Likes
- than relatives after using 150 Facebook-Likes
- than partner after using 300 Facebook-Likes.

It can detect religion, color, sexual orientation, political preferences ...

End of Privacy?

Profiling People by their faces (?)

From the website <https://www.faception.com>:

“Faception is first-to-technology and first-to-market with proprietary computer vision and machine learning technology for profiling people and revealing their personality based only on their facial image.”

**Description on their Website.
No proofs up to now.**

Cambridge Analytica Scandal:

Data from 87 millions Facebook users (without their knowledge) have been exploited for Microtargeting during the US elections 2015/16

Results to elections debatable

Privacy matters:

People behave differently under surveillance.

Who should be allowed to investigate personality and individual preferences from their data?

- Only machines can do calculations.
- But any humans can use it:
 - Government
 - Secret service
 - Employer
 - Physician
 - Teacher
 - Neighbors
 - Relatives
 - ...

Introduce laws?

Introduce moral guide lines?

Make machines react accordingly?

Human centered machine ethics:

- Control of machines
- Usage of machines to what purposes
- Changes of society
- How should humans follow the advices of machines
- Are machines allowed to decide about life or death
- ...

Scoring
Automated decision making
Employment
Surveillance
Military robots
...

(Hypothetical?) Future Problem: Rights of Machines

- Many chances
- Many problems
- Many questions

Thank you!

