

LEGAL ASPECTS OF ROBOTISATION

Prof. dr. Peter Grilc
University of Ljubljana, Faculty of Law

GOAL

INVITATION FOR A QUICK LOOK INTO ANOTHER'S BUBBLE

- for **non-lawyers**: to have an idea what and how **lawyers** deal with
- for **lawyers**: to have an idea what and how **robot(ics)-lawyers** deal with

RESULT

1. to have an **idea how to expand** the field of the expertise of your own
2. what to **expect** from us (lawyers)

THE 3 LAWS OF ROBOTICS

1st Law

A robot may **not injure a human being** or, through inaction, **not allow a human being to come to harm.**

2nd Law

A robot must **obey the orders** given it by human beings **except where such orders would conflict with the 1st Law.**

3rd Law

A robot must **protect its own existence** as long as such protection does **not conflict with the 1st or 2nd Laws.**

Asimov: I, Robot (1950)

ROBOT LAW ISSUES #1

LIABILITY

- damages caused by defective robot
- product liability

PROTECTION OF IP & INNOVATIONS

- IP as a result of design of robots (by humans)
- IP created by robots themselves

CONTRACT LAW

- R & D contracts concerning robots
- how to manage contracts concluded by robots

CRIMINAL LAW ISSUES

COMPETITION LAW ISSUES

ROBOT LAW ISSUES #2

LEGAL STATUS OF ROBOTS

ROBOTS & RIGHTS

- do robots have rights?
- robots as invaders into privacy of humans
- do robots have right to privacy?
- do robots have right to dignity? *Human dignity shall be inviolable. Art 1, GG*

PERSONAL DATA ROBOTS PROCESS

ROBOTS IN SPECIFIC SECTORS

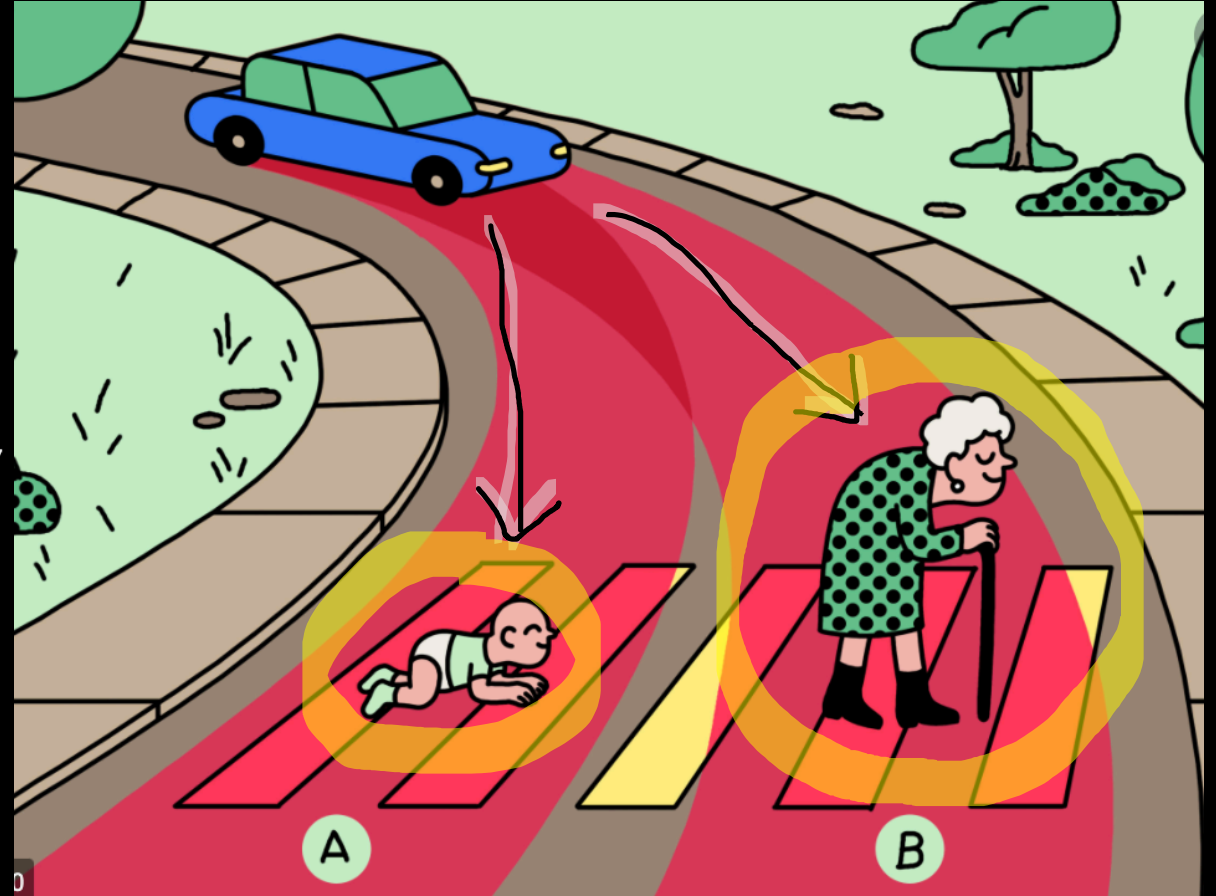
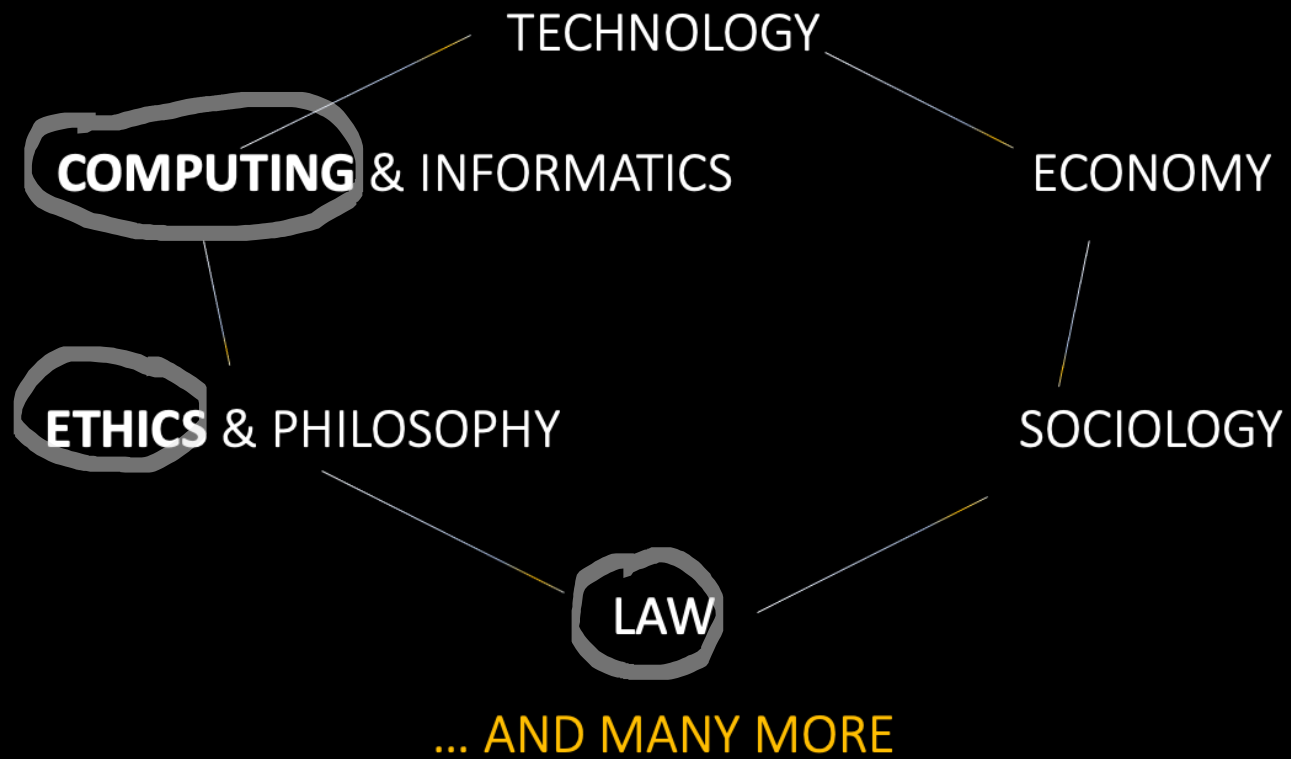
- specific regulation: health, education, financial services, law, manufacturing / smart factories

EXCITING LEGAL TIMES: THE NEED TO CATCH UP

FACT:

Trends in robotic technology: **significantly faster** than the development of legal science, legislation and case law regarding robots (regulation already obsolete by the time of adoption)

(.....)*DISCIPLINARY APPROACH



DESPITE LAW DOES NOT KEEP PACE WITH
THE TEMPO IN TECHNOLOGY

LAW IS IN POSESSION WITH QUITE GOOD TOOLS

(... HOWEVER, NEED FOR ABSTRACTION THINKING)

1st Law:

A *robot* may *not injure* a human being or, through inaction, not allow a human being to come to *harm*.

Art. 1382 CODE CIVIL (1804)

Any act of man, which causes *damage* to another, obliges the one by whose fault it occurred, to *repair it*.

ONE OF FUNDAMENTALS FOR LAWYERS: ROBOT'S PERSONALITY

Legal system is required to deal with this new type (of person?)

Easier to understand personality of robots through the **concept of legal entity** (company), not the **natural** person ...

PERSONALITY ISSUES - CREATION OF A PERSON

CLASSIC CATEGORIES

Natural persons (humans):

- laws apply to people created

• **by nature**

- **by birth**

Legal persons (companies, trusts):

- laws apply to **legally created** artificial entities that can act on their own

- birth **by registration; separate entity**

ROBOTS

New kind of person (Robot / the Robot person):

- laws apply to **technically** created artificial creations, as well that can act on their own
- born when put into **full operation**

NEED TO NARROW THE SCOPE & ILLUSTRATE BY EXAMPLE
THROUGH ...

LEGAL ASPECTS OF AUTONOMUS VEHICLES

(extracurricular / Institute for Comparative Law, 2019)

INFORMATICS *Prof. A. Brodnik, Faculty of Computer and Information Science*

LAW *Prof. P. Grilc, Faculty of Law*

ECONOMY *Prof. A. Groznik, Faculty of Economics*

ETHICS *Prof. A. Završnik, Institute of Criminology*

INSURANCE *Mr. J. Veberič, Triglav Insurance*

SEVERAL LEGAL FIELDS TO BE REMODELLED IN RESPECT OF REGULATION

INFRASTRUCTURE

- standards
- frequencies
- infrastructure
 - who builds it?
 - who owns it?
 - who operates it?
- concessions?
- impact on regulated markets - telecommunications

BUSINESS, LIABILITY

- responsibility / liability
- insurance
- compensation
- data / data analytics / GDPR
- collaborations and partnerships
 - producers of AV (as hardware) + software producers
 - driver / owner
 - data operators
 - data storage

COMPETITION LAW

AVs MARKET: A COMPLETELY NEW RELEVANT MARKET

CLASSICS <u>separate</u> relevant markets	AUTONOMOUS VEHICLES <u>one single</u> relevant market
car manufacturing or software or data analytics or social network tools	car manufacturing + software + data analytics + social network tool

NEW WAYS FOR DISTORTION OF COMPETITION ...

COMPETITION LAW

NEW WAYS FOR DISTORTING / PREVENTING OF COMPETITION

cartel: cooperation between several stakeholders from different sectors (conglomerate) in AV sector

concentrations: existing manufacturers merging into smaller number of bigger companies - efficient competition weakened

abuse of dominant position: common standards issue

state aids: role and participation of state in setting up infrastructure?

LIABILITY / RESPONSIBILITY
IN CASE OF AVs TRAFFIC ACCIDENTS

AV makes a decision the driver would never choose: dilemma - should the driver be held responsible?

Accident as result of

driver's error?

defect in functioning of the the system?

bad algorithm?

General on liability: producer / owner / user?

Allocation of liability for errors in software interface: AV producer / software manufacturer / developer?

AV ↔ AV

AV ↔ infrastructure

AV ↔ surroundings

SOME CRITERIA FOR ATTRIBUTION OF THE ERROR

Software updates demanded / offered, however **did not** occur: allocation of responsibility?

Accident due to **failure or disconnection to the network**: liability of the network owner / operator?

Introduction of **black box** obligatory by law?

INSURANCE

WHO SHOULD CONCLUDE INSURANCE CONTRACT

Same parties as now? (insurance company & owner)

New business models

- **single-insurer** model (supported by regulators & car producers)
- **a special AVs framework insurance** - project launched by UK insurers
 - option 1: **extension of compulsory** insurance
 - option 2: some manufacturers want **self-insurance**

Should the owner insure his liability insurance against third parties?

Limitation of damage from AV accidents?

- as product damage (no height limit) (=pharmaceuticals, defect machines)
- as the responsibility of the network owner: limiting telecoms as operators?

PERSONAL DATA / BIG DATA / GDPR

CYBER SECURITY

CO-OPERATIONS & PARTNERSHIPS

CO-OPERATIONS & PARTNERSHIPS

WHICH PARTNER SHOULD TAKE RESPONSIBILITY AGAINST 3RD PERSON

- software partner: only for software bugs?
- car malfunction partner only?

SEVERAL PARTNERS: PROBLEM OF DELIMITATION OF LIABILITY

- solution: construction contract rule on channeling (main contractor for subcontractors)

ENSURING COMPLIANCE WITH APPLICABLE REGULATIONS & REGULATORS

- one regulator or several? / solution: contract between partners

JOINT CONTROL OF PERSONAL DATA: SEVERAL PERSON ACCESS TO PERSONAL DATA ABOUT THE SAME INDIVIDUAL CONSUMERS

- the risk of shared responsibility
- GDPR: provides the ability to control data regardless of whether customers are operating
- independently and the data are used for different purposes (joint controllers) or together and use the data for the same purposes (joint supervisors)
- bilateral agreements?
- protection of IP in partnerships

DATA OWNERSHIP

- connected vehicles collect data while driving: who owns the copyright for this data?
- data collected & processed in the car's software (owned by the AV or software manufacturer) but data collection would not be possible without the driver's "work" – evaluation of the shares?

APPLICATION FOR IP - REGISTRATION AND PROTECTION

- R&D AV: includes a number of IP rights (software design patents, software copyrights, business

COMPLETELY DEVELOPED IP

- as in any cooperation a necessary agreement of the partners who has a jointly developed IL / license?

AV's AS SOCIAL NETWORKS TOOLS

LARGE AMOUNTS OF DATA (ALSO) DUE TO SOCIAL MEDIA

- for basic functions (driving) + built-in infotainment functions
- connection pricing model?
- sale of data as ancillary services or change of the traditional car pricing model

ASSIGNMENT / DISTRIBUTION OF RESPONSIBILITIES

- accident due to the use of social media in AV
- communication accident AV-social network

AGAIN

THE 3 LAWS
OF ROBOTICS:
APPLICABLE
OR NOT?

Still applicable: **firm YES**

Can they be used as a background thinking because of their general and abstract approach: **triple YES**

Need for legal at least partial regulation - obviously no other way: **inevitable YES**