Self-moving Vehicles

From Technical to Legal Revolution

International Conference

Legislating for Tomorrow: How comparative law may contribute to solving regulatory challenges of our time

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Institute for Climate Change, Energy and Mobility – Interdisciplinary research institute designing the law and policy framework for the energy transition – see www.ikem.de

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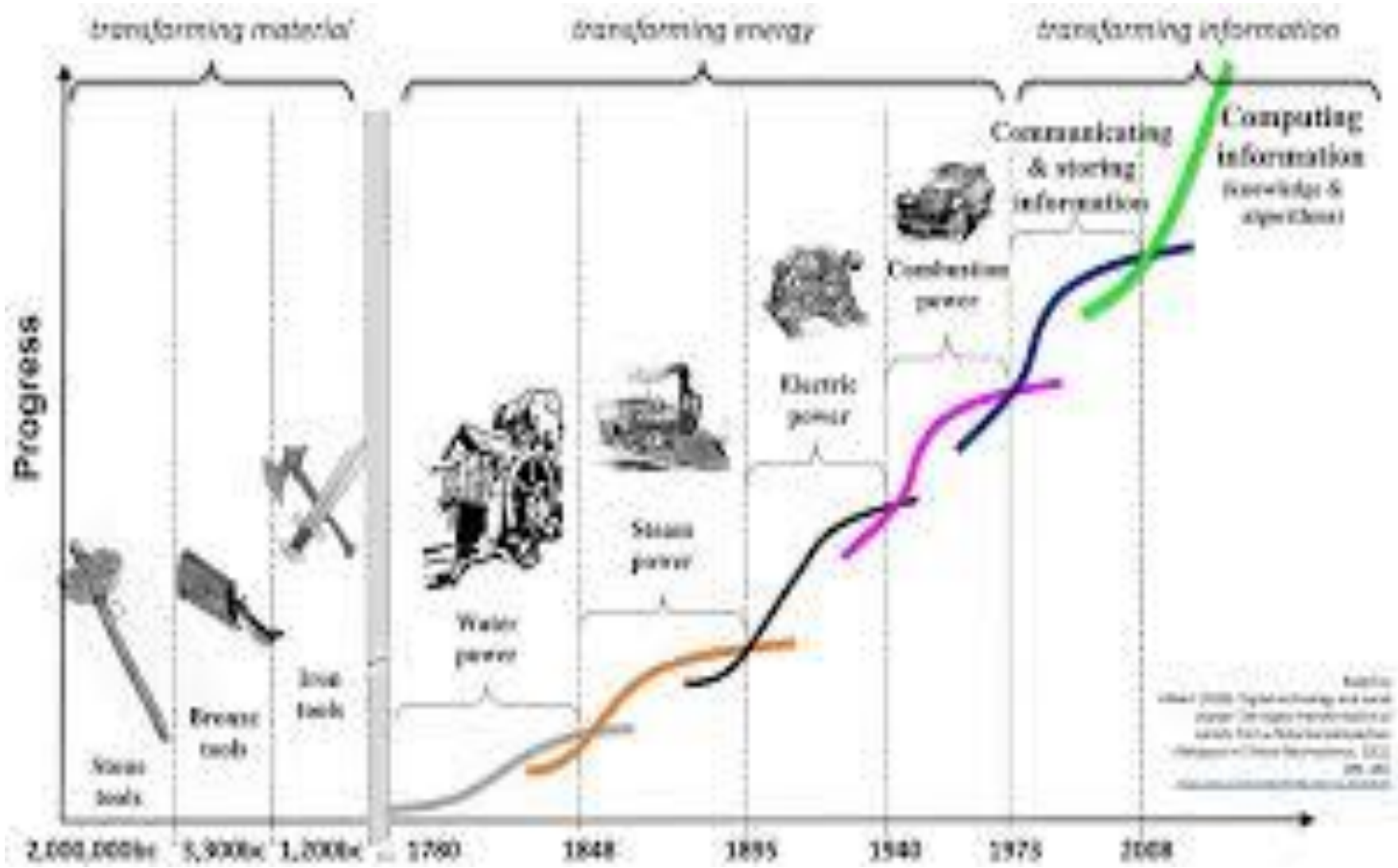
I. Self-Moving Vehicles as a Challenge to the Legal Order



Self-moving (autonomous) vehicles are a technical revolution that can be seen in one line with the invention of the wheel and vehicles at all and the invention of motors

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I. Self-Moving Vehicles as a Challenge to the Legal Order

EU Regulation (EU) 2019/2144 (applied from July 2022 on):

‘automated vehicle’ means a motor vehicle designed and constructed to move autonomously for certain periods of time without continuous driver supervision but in respect of which driver intervention is still expected or required;

‘fully automated vehicle’ means a motor vehicle that has been designed and constructed to move autonomously without any driver supervision”.

I. Self-Moving Vehicles as a Challenge to the Legal Order

Like every technological change or revolution this leads to an enormous challenge for the legal order:

> The driver has always been the focal point of legal responsibilities, e.g. regarding road traffic regulation and liability

- The use of traditional vehicles did not necessitate biger data collection (for the first time this changed with electronic maut systems)

I. Self-Moving Vehicles as a Challenge to the Legal Order

Enormous time pressure to develop new legal order as many countries want to bring self-driving vehicles on the road quickly

Reason 1: Many advantages of self-driving vehicles

- more safety – less traffic victims
- increasing mobility for those that could not participate in individual mobility
- environmentally positive effects (incl. climate)
- ….

Reason 2: Many countries want to be technological leaders

- competitive advantages

II. Self-Moving Vehicles: Global Aspects and International Law

1. Public International law

1949 Geneva Convention on road traffic (101 countries have ratified): some uniform rules regarding international driving lisense, minimum age, registration number

1968 Vienna Convention on Road Traffic (83 countries have ratified): standard traffic rules

United Nations Economic Commission for Europe (ECE or UNECE) of 1947 (56 member states) – esp. UNECE World Forum for Harmonization of Vehicle Regulations (WP.29): provisions (for vehicles, their systems, parts and equipment) related to safety and environmental aspects, e.g. on type approval

II. Self-Moving Vehicles: Global Aspects and International Law

1. Public International law

Regulatory self-coordination to foster safety in international traffic; standards also in the interest of global trade with cars

Public international law clearly stood against autonomous driving

The miracle of a fast transformation and the role of law comparison due to interesting amendment clauses (like Article 49 Vienna Convention): contracting parties may make suggestions that enter into force, if less than one third of the contracting parties object (those are then not bound, but can join later)

II. Self-Moving Vehicles: Global Aspects and International Law

1. Public International law

Consequences for legislating and law comparison

- Law comparison important for states that suggest amendments for international framework
- Legislatures take international treaties into account, even though they are not contracting parties
- Law comparison in the area self-driving vehicles has to consider the international framework more intensively than in other areas

II. Self-Moving Vehicles: Global Aspects and International Law

2. The special role of European Union law

Harmonized safety standards crucial for the Common Market – EU regulation as link between international law and national regulation

EU is transposing international framework as binding to (all) Member States

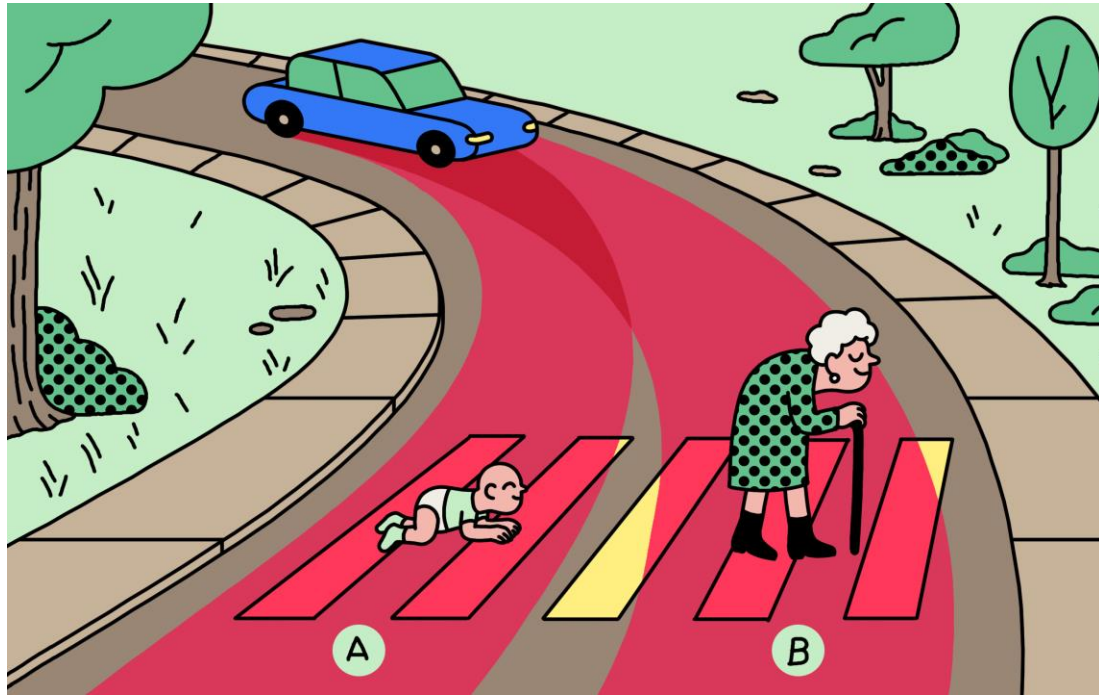
Special relevance of law comparison within the European Union – how do Member States fill remaining regulatory leeway?

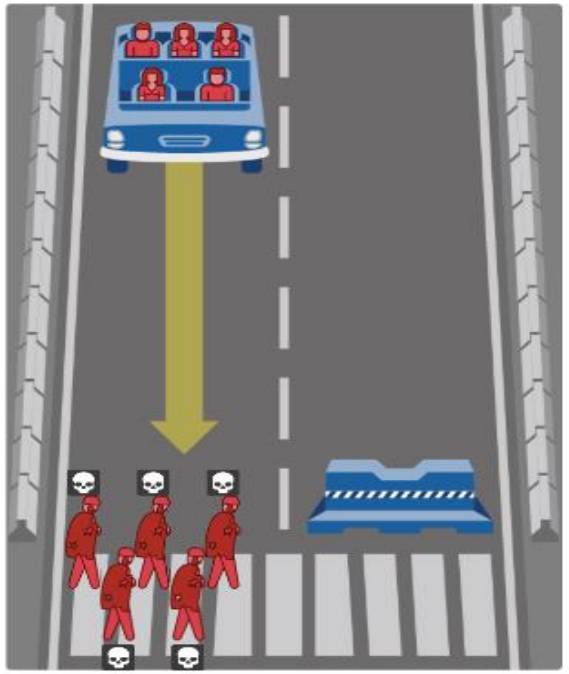
III. Attitudes towards Self-Moving Vehicles and their Regulation

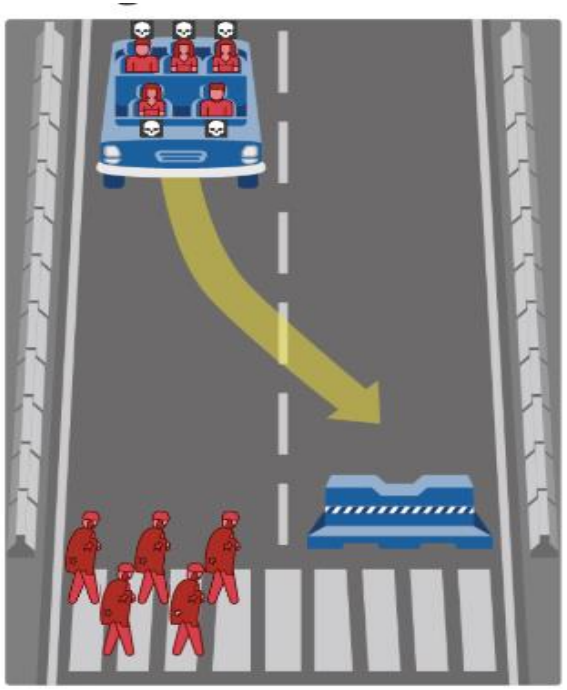
1. The ethical debate

There has been a broad ethical debate in Europe and especially Germany, whether

- The state may allow a technology leading definitely to victims
- How to solve dilemma problems







III. Attitudes towards Self-Moving Vehicles and their Regulation

2. Ex-ante regulation vs. ex-post regulation by jurisdiction

Two fundamentally different regulatory approaches:

- Ex-ante regulation, esp. Europe
- Ex-post regulation, esp. USA

Accordingly, completely different challenges for law comparison

V. The Convergence of the Regulatory Framework for Self-Driving Vehicles

1. Definition of the new technology – according to SAE (Society of Automotive Engeneers) as a private standardisation organisation

2. Principle of an external instance - technical supervisor (German Road Traffic Act 2022) or supervisor (UK Automated Vehicles Act 2024) intervening „on call“ without constant monitoring

3. Rules on data storage and use (but very diverging regarding role of public authorities)

4. Liability schemes, esp. obligations of manufacturers

V. Conclusion

1. Technical revolutions lead to high pressure for legislatures to adapt legal order

2. Time pressure doesn´t allow national legislators to develop their respective laws independently

3. International legal framework can be an obstacle to developing new legal frameworks. In the area of self-driving vehicles the conventions have foreseen prudent clauses for reforms in a bottom-up process with a clear-cut role of law comparison.

4. Again: The difference between coninental and common law approaches matters!

5. There is an interesting dynamic to develop harmonized regulatory concepts.

Thank you very much for your attention!

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