



*Adapt!Ve*

*Automated Driving Applications and  
Technologies for Intelligent Vehicles*

Jochen Feldle  
University of Wuerzburg

*The Trolley Problem  
In the context of autonomous driving*

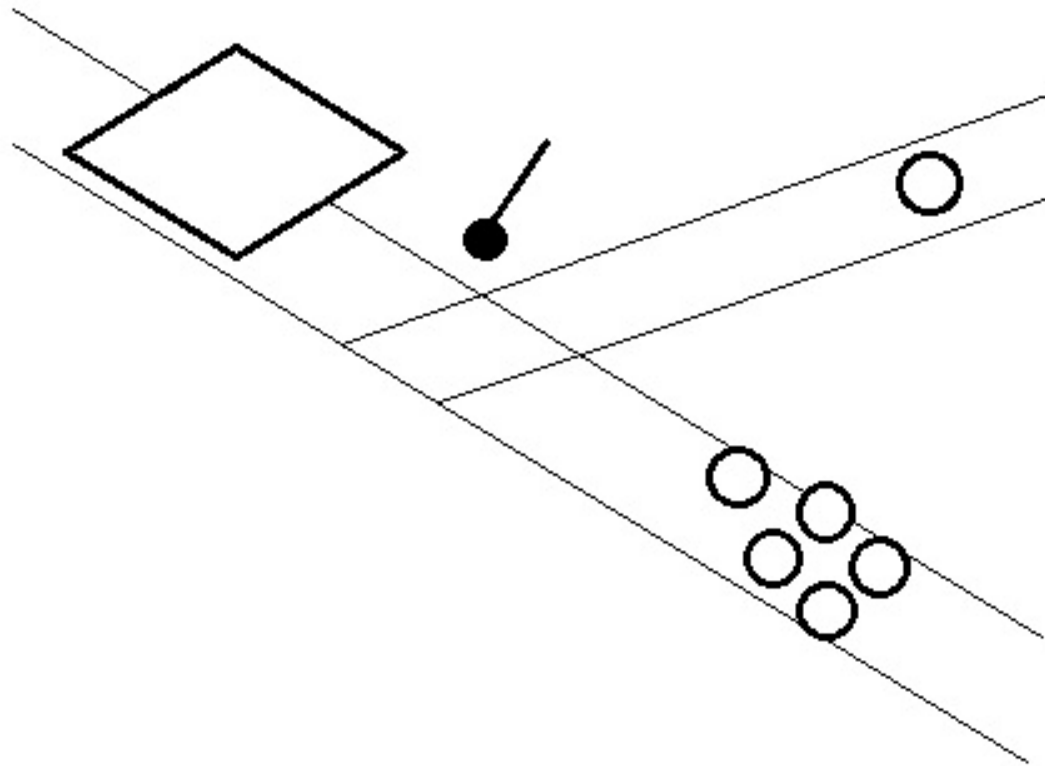
GA Athens  
22. April 2016



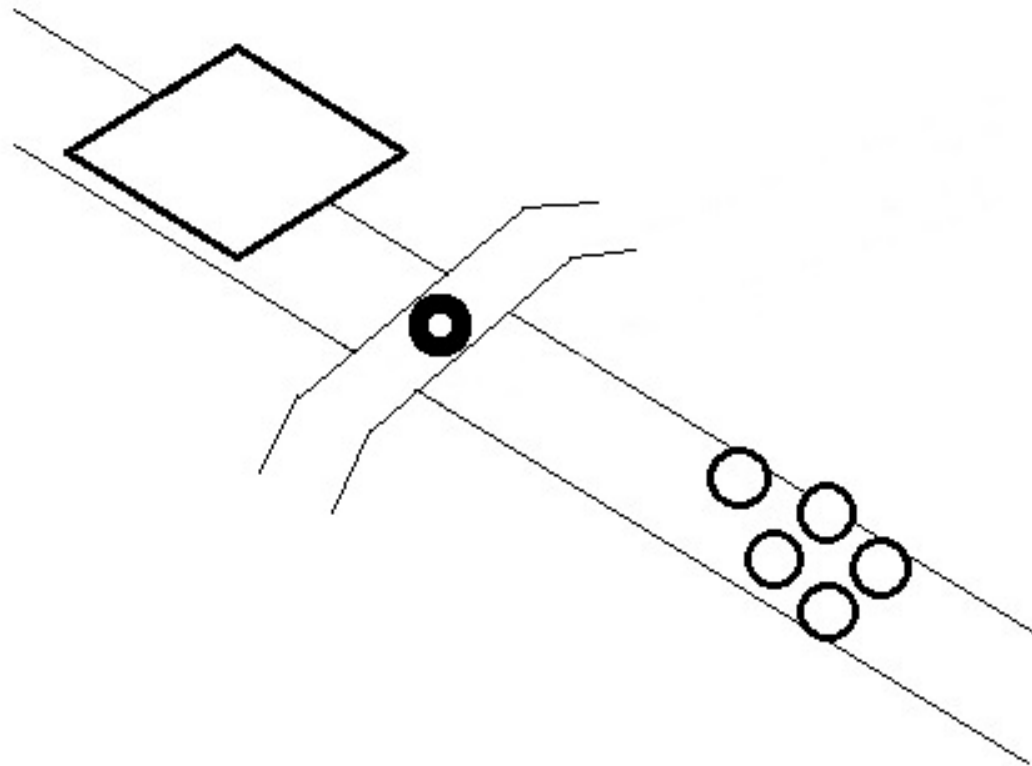
# // The Trolley Problem

To be accepted:

- Braking impossible
- Can't warn anybody
- People will die



# // The Trolley Problem - The Fat Man



## //Relevance

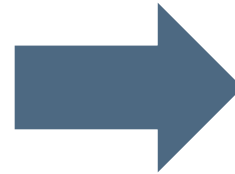
### Human morality

#### Philosophical

- Consequentialism / Utilitarianism
- Deontology

Result in both cases: One person dies, five survive.

Difference between *killing* and *letting die*?



### Legal opinion

In either case people die.

By action or omission?

- Justification?
- Apology?

# // Legal Opinion

German law

In case of omission:

- Manslaughter
- No Guarantor position
- Besides:

In case two objects of legal protection of the same level collide  
*(life vs life) -> duty to omit every action*

# // Legal Opinion

German law

In case of action:

- Illegality:           **Justification?**

§ 34 StGB (Criminal Code)

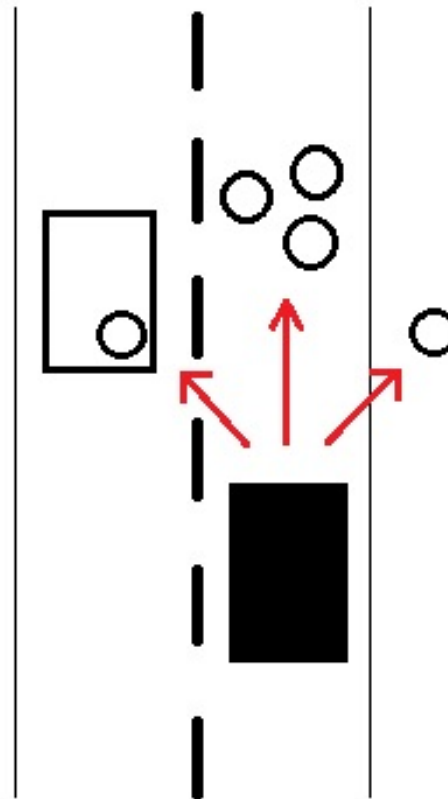
Action can be justified “if, upon weighing the conflicting interests (...), the protected interest substantially outweighs the one interfered with.”

→ Weighting of lives strictly prohibited!

- Fault:                   **Emergency beyond law**

## //With regard to autonomous driving

*Advanced Driver Assistance Systems designed to prevent collisions*

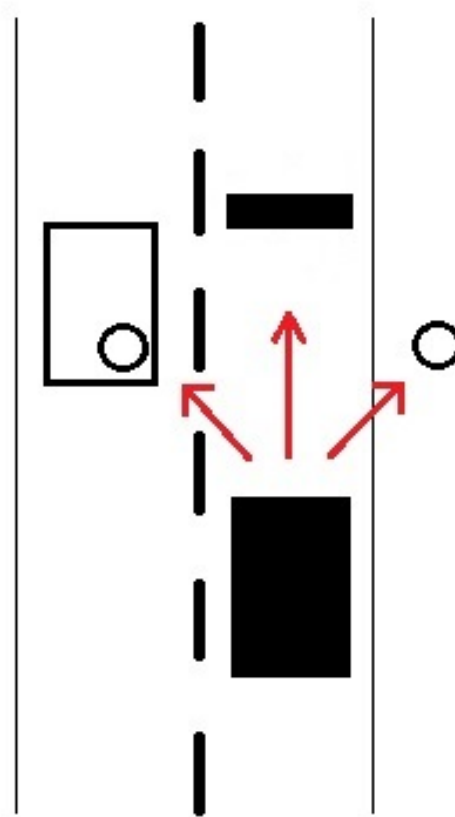


To be accepted:

- Too late to brake
- People will die

## //With regard to autonomous driving

*Advanced Driver Assistance Systems designed to prevent collisions  
- Suicide scenario -*





# // Responsibility

## Responsibility:

- Driver
- Manufacturer
  - Programmer
  - Company -> no corporate liability in Germany

## Approach:

- “Allowed Risk”

## Status quo:

- Legal dilemma



Co-funded by  
the European Union

# Adapt*!*Ve

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University of Wuerzburg

[jochen.feldle@jura.uni-wuerzburg.de](mailto:jochen.feldle@jura.uni-wuerzburg.de)

*Thank you.*

