The EC Report on Ethics of CAVs and the Future of Ethics of Transportation

Filippo Santoni de Sio

Section Ethics/Philosophy of Technology (EFT)
Department Values, Technology and Innovation (VTI)
HUMAN FACTORS AND PHILOSOPHY
European Commission - Report Independent Expert Group to advise on specific ethical issues raised by driverless mobility
20 RECOMMENDATIONS covering:

ROAD SAFETY

DATA, ARTIFICIAL INTELLIGENCE AND ALGORITHMS

RESPONSIBILITY

European Commission - Report Expert Group to advise on specific ethical issues raised by driverless mobility
The European Commission report on ethics of connected and automated vehicles and the future of ethics of transportation

Filippo Santoni de Sio

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Abstract

The paper has two goals. The first is presenting the main results of the recent report *Ethics of Connected and Automated Vehicles: recommendations on road safety, privacy, fairness, explainability and responsibility* written by the Horizon 2020 European Commission Expert Group to advise on specific ethical issues raised by driverless mobility, of which the author of this paper has been member and rapporteur. The second is presenting some broader ethical and philosophical implications of these recommendations, and using these to contribute to the establishment of Ethics of Transportation as an independent branch of applied ethics. The
### Responsibility (Gaps) and Meaningful Human Control

**Four Responsibility Gaps with Artificial Intelligence:** Why they Matter and How to Address them

<table>
<thead>
<tr>
<th>Type of responsibility</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Culpability</td>
<td>Blameworthiness for wrongdoing based on intention, knowledge or control</td>
</tr>
<tr>
<td>Moral accountability</td>
<td>Duty of human persons to explain one’s reasons and actions to others (under some circumstances)</td>
</tr>
<tr>
<td>Public accountability</td>
<td>Duty of public agents to explain their actions to a public forum</td>
</tr>
<tr>
<td>Active responsibility</td>
<td>Duty to promote and achieve certain societally shared goals and values</td>
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**Meaningful human control as reason-responsiveness: the case of dual-mode vehicles**

Giulio Mecacci, Filippo Santoni de Sio

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ETHICS OF TRANSPORTATION
Driving to Safety

How Many Miles of Driving Would It Take to Demonstrate Autonomous Vehicle Reliability?

Nidhi Kalra, Susan M. Paddock

Key findings

- Autonomous vehicles would have to be driven hundreds of millions of miles and sometimes hundreds of billions of miles to demonstrate their reliability in terms of fatalities and injuries.

In the United States, roughly 32,000 people are killed and more than two million injured in crashes every year (Bureau of Transportation Statistics, 2015). U.S. motor vehicle crashes as a whole can pose economic and social costs of more than $800 billion in a single year (Blisnuk et al., 2015). And, more than 90 percent of crashes are caused by human errors (National Highway Traffic Safety Administration, 2015)—such

(Funtovicz & Ravetz 1990)
HOW FAIR IS SAFE ENOUGH?
The Life-Saving Car Technology No One Wants

Safety features that would make vehicles far less lethal to pedestrians exist right now. Why aren’t they required?

By David Zipper
12 August 2020, 14:00 CEST

SAFETY OR FREEDOM?
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