

# Highway Blues? Autonomous Driving, Hitchhiking & The Duty to Rescue

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## Abstract

Will hitchhiking still be a mobility option when autonomous road vehicles (SAE level 4 or 5) drive us? Hitching a ride should be differentiated from using ride-sharing services: The former is based on spontaneous face-to-face communication and does not require any form of technology besides the road vehicle. It enables spontaneous, affordable and environmentally friendly trips and brings people from quite different backgrounds (culture, subculture or social position) in conversation with each other. Thus, it is a valuable form of mobility and cultural phenomena.

At first glance, the chances for hitching a ride with an autonomous vehicle (AV) seem quite bad: One of the purported advantages of this emerging technology is that the passengers of the AV do not have to monitor the traffic anymore and thus might not notice the presence of a hitchhiker. Therefore, the AV would have to notify the presence of a hitchhiker. Additionally, the AV would have to offer the option to stop. At first glance, it does not seem very plausible that AV manufacturers invest the resources to enable an AV to detect hitchhikers, notify the passengers and offer the option to stop. At a fundamental level one could say, the problem is that hitchhikers are not included in the design ontology of AVs.

However, the prospects for hitchhiking in the era of autonomous driving look better, when one takes into account that AV manufacturers are obliged to take at least the first steps to enable the algorithm of the AV to recognize hitchhikers. Road users have a duty to rescue other persons in emergency conditions. This duty to rescue – for example a duty to provide first aid when it is not too risky – can be morally and politically justified and is legally implemented in a lot of countries. An ordinary civilian at the road making hand signals might be a person in an emergency situation, but, of course, it might be – besides further possibilities – also a hitchhiker. Since AV manufacturers should secure their products to act in accordance with the duty to rescue and notify the passengers of an emergency situation (as they are the persons who face the duty to rescue) it is reasonable to enable the AV to recognize that a hitchhiker is at least not a person in an emergency situation. The additional step to include the hitchhiker in the design ontology and to have at least the option of a notification should be technically small.

If AV manufacturers do not include at least an option for the passengers to be notified of potential hitchhikers on the road, I can envisage (at least) two scenarios:

- 1) Hitchhiking will indeed not be practiced any more in environments where autonomous driving prevails.
- 2) Hitchhikers will become (even more) creative and outsmart AVs by performing a behavior that forces the AV to notify its passengers and offer nearby an option to stop.