

# New Logics of Ethics in the Age of Digital Platforms: Design Fictions of Autonomous Cars

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**Abstract.** Autonomous cars are the first major examples of Artificial Intelligence (AI) in everyday life. When cars are transformed into platforms, new service relationships emerge between car companies and the car users. These relationships generate gains and catches for both parts related to how physical and non-physical resources are exchanged in the sharing economy; how integrity is negotiated; and how responsibility is delegated when AI enables the car to take over most of the driving. With a “car as a platform approach”, in this paper, we present a design fiction on ethical implications for citizens’ daily lives with autonomous cars.

## Design fictions of autonomous cars

Our brief speculative design fiction about autonomous cars is a response to the call for engaging in socio-technical debates around disruptive technologies. Through putting future scenarios in perspective, we emphasize the importance of engaging in such debates prior to the actual design of these technologies. We believe that design needs to depict a world that is aligned with human desires and ideals rather than merely responding to increasingly outdated business models and value metrics. In that light, we hope that this short speculative design story is an

appropriate medium for triggering debates on human ideals and desires when it comes to designing smart cities.

The scenarios are a result of an ongoing design project so far consisting of 20 formal and many informal project meetings with actors, such as the automotive industry, municipality and university between June 2018 and March 2019. They are also inspired by an interview we conducted with a Swedish judge who had an extensive role in writing the proposal for the Swedish law on autonomous cars. As the development of autonomous cars is at its early stages, and since the employment of this technology is subject to extant political ruminations, it was important to know how the topic of autonomous cars is seen on a political and governmental level.

## Speculative scenarios

*Sharing economy.* Autonomous cars are vivid examples of digitized products that can function as platforms (cf. Eaton et al. 2015; Ghazawneh and Henfridsson 2013; Islind et al. 2016) enabling car companies to sell flexible A-to-B transportation services to individuals. The core incentive in these services is the possibility for saving individuals' time and money. Our respondent judge, who has written the Swedish legal proposal for autonomous cars, emphasizes the importance of such possibilities

*"...If you think about the Internet of Things, it's all about selling time in a way to make things easier for you, and that through making things talk to each other. So that's a huge shift from selling a product to selling time. You are selling the car each second."*

Once individuals' minds and hands are freed from having to think about driving, parking and managing the car, there will be opportunities for users to engage in other activities such as e.g. working or socializing during their travel time in autonomous cars. This is where the autonomous cars, as digital platforms (Islind 2018; Shahlaei et al. 2019), can also enable various firms even outside the automotive industry to develop services for users freed travel time. The question is what these firms will try to fill the users' time with and how users will accept and make use of these new offers. As our respondent judge continues to reason, once companies start to sell time, *"they want to lure humans into their vehicles"*, and once they succeed to do so, they can *"sell other services to the person in the car."* Important considerations are thus raised about what are the "currency" or value metrics when exchanging resources in a shared economy (McAfee and Brynjolfsson (2017).

*Negotiating integrity.* Sharing data will lead to sharing resources and ever more innovation of services (Norström 2019). However, sharing data also implies increased transparency. The term "transparency", with its positive tune tends to connote trust and honesty. Yet, although it's only human to hope for the best, it's

smart to do so wisely. Take for instance, how our respondent judge points to “consenting” to sharing your “profile” in exchange for free transportation:

*“You can, if you know the profile of the user, have commercials, adapted to that person's profile, in the car. So maybe you want them to stay there as long as possible and maybe if you agree to sit in his car and watch commercials, you'll have transportation for free. So that price of transportation would be almost nothing in the future in big cities.”*

Such a consent can make the data, that was once considered personal and shared among limited people, available to any curious individual or corporation, and this can be the opening to both a Utopian or a Dystopian information society (Boyd and Crawford, 2012). In an effort to “adapt” the commercial to one’s personal taste, a picture of individuals is built based on as little real interaction with the individuals as possible. In this scenario, many things can go wrong concerning who has access to personal information. However, a more clandestine plot would be to ask whether individual’s identity can be affected by the type of commercials that are fed to them in the car. Once individuals “consent” to share their profile for “adapted” commercials, the commercials are supposed to represent individuals. Upon repetition, one can eventually and unconsciously come to believe that they are interested in items and services constantly broadcasted to them, and thereby seeing a picture of their “self” as composed in the commercials. This scenario is close to what Zuboff (2015) recognizes as “reality” being a subject to commodification. The critical question would be, which one is the commodity in this context; the individual or the mobility services?

*Delegating responsibility.* Delegating responsibility to AI can not only be a relief for humans, but also an efficient way of running things fast enough in a system of connected artificial intelligence, as our judge respondent elaborates. By removing the human driver, she maintains, the human is moved from inside to the outside of the decision loop. But with initiatives from countries such as Germany, legislation should consider that, there is always a human who has programmed the digital driver and set the scene for things to transpire in a specific way. Therefore, even when humans are not directly in the decision loop, they are still completely present in their supervisory roles above the decision loop. However, our respondent judge also points out that humans cannot be considered responsible that easily:

*“I think the human cannot be responsible for this. I can understand the emphasis on human responsibility when it comes to discussions around autonomous nuclear weapons. But in the case of autonomous cars, when each car is connected to the other cars, the human is not cognitively fast enough to respond and interact [in such an environment]. So, what’s it going to be like? That you’re sitting in the car, reading the paper, suddenly something goes wrong and now you have to put aside the paper, look around, understand the traffic situation?”*

It is not just the lack of required speed to interact with smart cars, that is the problem. As Thrift (2006) mentions, once information technologies turn into smart collaborative agents, human agents need to learn to work with them. This way, human agents will largely learn patterns of behavior that work when interacting with those smart agents. The smart agents in turn, function based on the logic of accumulation in which they are embedded and the conflicts inherent to that logic. Such logic of accumulation produces its own social relations and conceptions. In case of accidents or traffic complications, for example, instead of thinking how the other human (drivers) might think or act, the humans in the smart transportation system need to think how AI algorithms are logically programmed and what problems they might have inherited from their programmed logics. Humans will then need to develop different cognitive skills to be able to make sense of the new situation around them. The question then would be, is this scenario not implicating further responsibility for humans, only in a different disguise?

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