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Autonomous Vehicles: The Need for a Separate European Legal Framework

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Abstract

Regulating autonomous vehicles is not only a question of finding solutions in connection with the technical aspects of the legal framework. Rather, it involves making preliminary policy-based decisions that take all stakeholders into consideration. This article makes the case that efforts must focus on how to incentivise the use of autonomous vehicles without putting the burden on the shoulders of those who will ultimately make use of them. In that respect, the existing regulation (implemented on the basis of the Product Liability Directive and the Motor Insurance Directive) is insufficient, as there is a considerable mismatch between the current framework and the challenges posed by autonomous vehicles. There is a need to act urgently on the regulatory level.

Keywords

Autonomous vehicles, Product liability, Civil liability, Motor insurance

Introduction

One of the major underestimated benefits of the EU is its slowness. This is especially the case in a world where progressive and even revolutionary views are becoming more and more attractive. The peculiarity of the EU that a policy measure can only be introduced after passing a careful process of procedural deliberations makes for a certain systemic aversion to suboptimal decisions. However, there are cases where failure to act in a timely manner results not only in a loss of competitive advantage, but also in irreparable deficiencies. One such case is establishing the future regulation of autonomous vehicles (AVs). This article suggests that the issue should be addressed by the EU, which should do this, for the most part, by providing a guarantee that nobody would be undercompensated, even at the expense of technological innovation.

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Technically speaking, AVs are vehicles that can operate independently of human input. In more detail, according to the established definition set forth by SAE International, a renowned standards developing organisation, there are five levels of driving automation. It is currently possible to test Level 3, or 'conditional', automation. As a result, it is already clear that this level will have a positive impact on transport and on road traffic of all kinds. This is because Level 3 is the first of the levels at which drivers can turn their attention away from driving tasks. Certain European companies, such as Audi, claim that by 2021 they will be prepared to bring in Level 4 autonomy, where drivers are not called upon to intervene. Once we reach Level 5 autonomy, an AV will be able to operate on its own everywhere and in all conditions.

The AV industry and market have been making huge leaps forward. According to a recent study, between 2003 and 2015 the number of devices containing some form of artificial intelligence–driven solution quadrupled (Dima 2019, 3). The future has arrived, but it is still doubtful whether the benefits of using AVs outweigh the disadvantages. This is because while older types of accidents will disappear, new and possibly more violent ones could emerge (Winkle 2016, 593). Such accidents could result in fatalities even if the driver's obligations were different. What has been called 'the first AV-caused incident' provides an example. This accident occurred in Tempe, Arizona in 2018. The ensuing investigation concluded that the human driver 'failed to monitor the driving environment and the operation of the automated driving system' because she was distracted by her personal cell phone (*The Verge* 2019). The lack of public acceptance of the technology could hinder its indisputable usefulness before the technology even reaches the next stages of implementation. There is no other way to overcome people's doubts than by establishing a clear legal framework for how AVs are actually supposed to be used. Taking this as their starting point, the following sections will provide a non-exhaustive list of the specific issues that should be tackled, particularly on the EU level, and suggest a number of solutions.

The need for the fast creation of a separate legal framework

The idea of self-driving machines is new to many people, but the question of who should be responsible for AVs' behaviour is actually old—but it still has not been answered. The scale of the problem is hard to comprehend. There are as many opinions and ideas about regulating AVs as there are conflicting interests in the area. Thus, it is hard to imagine general, normative principles that would govern their use. When it comes to responding to the need to regulate new social challenges, the US is a fast mover. But even Washington has not yet been able to establish a uniform legal framework that covers all aspects of AVs. All the same, considerable effort has been made to find solutions. As early as June 2011, the Nevada legislature passed a law authorising the use of autonomous cars, and since 2012 nine other states have passed legislation on AVs (Ilková and Ilka 2017, 431).

The situation is different in the EU. Although the European Commission is promoting the Vision Zero safety project—which aims at there being no road fatalities on European roads by 2050 (European Commission 2018, 3)—it has simultaneously stated that 'no

changes are necessary as regards autonomous vehicles' (Patti 2019, 128). The Commission holds that more recent developments in transport are covered sufficiently by the existing Motor Insurance Directive (MID) and Product Liability Directive (PLD), and that further regulation is therefore not needed. Moreover, not many MEPs have warned about the need to move quickly. One who has is Wim van de Camp, who was a Dutch member of the European People's Party Group in the 2014–19 European Parliament. Van De Camp had, on his own initiative, written a report on autonomous driving, in which the key phrase is 'without delay' (Van De Camp 2018). Although AVs do not have the flaws of conventional vehicles, it is hardly conceivable that the legislators who established the present laws and regulations were able to predict the advent of machines that operate independently of human beings. If we could be certain that there would be no popular backlash against the technology, a laissez-faire approach would be more suitable. But there is no real reason to think this. The market could fail in numerous ways. The higher rates of crime that the use of AVs could lead to represent only one example of the possible effects that cannot be ruled out (Cohen and Cavoli 2017, 23–5).

The tendency of the EU to move slowly is well illustrated by its response to the issue of strict liability. This notion was developed in US jurisprudence throughout the 1960s as a form of no-fault liability, vis-à-vis the manufacturer, in the event of defective products. The European Community waited until 1985 to enact its Directive 85/374/EEC on product liability. This delay was due to the fear that production costs would rise. In the end the Directive proved to have less impact on manufacturers than expected, although it granted consumers easier access to remedies (Spacone 2000, 343–4). However, today technology is developing faster than before, and over-regulation can hinder innovation more easily. Given the Brexit campaign's well-known accusations about over-regulation in Europe, it is ironic that it was England and Wales which understood that their current system had too many shortcomings and in 2018 adopted the Automated and Electric Vehicles Act. This act was added to the UK's existing framework for traffic liability and now stands as an inspiration on this topic (Patti 2019, 134–6).

Sorting out the problems

Legal issues related to AVs fall within the scope of all three main categories of law: civil, criminal and administrative. They need to be tackled in parallel but not all with the same degree of urgency. Criminal law issues fall within the scope of the exclusive competence of each member state and will thus be dealt with mostly on a national level. These include the questions of who is responsible if a crime is committed through the use of an AV (e.g. criminal liability for the death of pedestrians) and how to prevent cybercrime if the system is hacked. However, even without a common EU framework, some member states will have to adapt their laws to the new reality as most European legal systems are built on the idea of personal guilt, thus excluding any form of corporate criminal liability. This circumstance does create gaps in the criminal law regulation.

In principle, there is no persuasive reason to introduce corporate criminal liability in every member state. However, issues such as the regulation of AVs, which might appear

to be side issues, may become a reason to do so. For otherwise the benefits of AVs would be significantly reduced—if the driver had to remain alert to monitor the vehicle's activities and neither the manufacturer nor any other entity was faced with any criminal liability at all. This is just one case of many which show that there are numerous indirect and preliminary questions that we must address before turning our attention to the issue of the comprehensive regulation of AVs.

At the same time, to avoid uncertainty about the basic conditions for operating an AV, most regulatory questions should be resolved within the EU. These questions involve issues such as certification, licensing, technical inspections and road traffic rules. Other issues include whether a special driving licence (or any driving licence at all) is needed, age requirements, whether AVs should be restricted to certain types of roads and the applicability of all road signs—and even whether drivers must be sober (Ilková and Ilka 2017, 431). It is highly probable that every member state will want to foster the use of AVs, but some states might land up limiting access to them by creating legislation that is poorly drafted or inappropriate. If administrative law were to be interpreted differently in each member state, this would create a horizontal barrier and result in cases that are similar to each other receiving unequal treatment, including an unfavourable choice of forum in the event of litigation. A common approach to the administrative regulation of AVs could also be an attractive marketing tool for the EU.

Possible conflicts with other EU laws also need to be addressed when estimating the outcome and effectiveness of new regulations. AVs collect an enormous amount of data, which is why they are referred to as 'data octopi' (AdaptIVe Consortium 2014, 26). The sheer magnitude of the data involved poses a major risk. Some of the data is collected by Event Data Recorders (EDRs). These devices are embedded in the vehicle's system to collect data that could be referred to in the event of an accident. This data would constitute very important evidence in court cases. However, regardless of any technological advances, manufacturers will have to meet their obligations under the GDPR. Among other things, this means that they will only be able to process personal data if they first obtain the driver's consent and if the proper information has been provided (AdaptIVe Consortium 2014, 29). Although data minimisation would be welcome, without data collection—and in particular, without the use of EDRs—it would be hard to trace who is liable for an accident in complex situations. If there are no clear answers to the questions of whether EDRs comply with data privacy legislation and whether it is legal to gather complex data from AVs, manufacturers will not be motivated to invest in EDRs.

Who is guilty?

When it comes to answering the question of how accessible and expensive AVs will eventually be, the issue of how liability is to be allocated is of first importance. Imagine an ordinary accident involving an AV. Immediately questions arise. Did the driver act negligently? (However, is not the greatest advantage of AVs the fact that you may act negligently or not act at all?) Was the accident caused by a software or a hardware problem—and what would be the difference? Was the system hacked by a third party (Dima 2019, 20)?

Did the road traffic contribute to the blunder made by the vehicle? A careful examination of these issues shows that the number of parties that could be considered liable—such as infrastructure operators, service providers and software developers—is simply too large (European Transport Safety Council 2016, 20). In the case that followed the Tempe accident, it was indeed ruled that the person operating the vehicle was guilty. But the report also blamed both Uber and the federal government for their acts and omissions.

The EU's only response so far seems to have been confined to the framework of the Motor Insurance Directive and PLD, so that product liability and damage liability are the two pillars of the current legal framework for AVs. However, neither is suitable in its current form. It is true that the issue of product liability has, for the most part, been settled. However, this does not provide uniform regulation of liability with regard to victims of road traffic accidents, as the liability of the driver is dealt with in various ways by the member states.

There are other issues linked to AV-related incidents. First, under the PLD the burden of proof lies with the victim. This can be challenging, to say the least (Lohmann 2016, 337). Second, the PLD upholds the 'development risk defence', according to which a producer bears no liability if the state of scientific and technical knowledge at the time the product was put into circulation was insufficient to allow the producer to discover the defect (Patti 2019, 138–9). By adhering to this doctrine, it would be fairly easy for the manufacturer to claim that the defect which caused the damage did not exist at the time the AV was put into circulation or that it did not become apparent until later on. Situations involving software failure pose an even greater problem. It is unclear to what extent software can be treated as a product in the hardware-oriented PLD (Dima 2019, 27). Even if we assume that software is a product, what does it actually mean for software to be defective? And how can this be proven by the consumer, who bears the burden of proof in court?

Turning to the Motor Insurance Directive, in its current form it only contains two relevant points: vehicles must be covered by motor insurance, and victims can lodge claims directly against the insurer. However, the insured risk is assessed differently in different member states (Evas 2018, 24). Moreover, compulsory insurance does not in itself lead to a no-fault system but only replaces the insured party with the insurer in case of tort (Patti 2019, 130). Furthermore, drivers of AVs may become the victim in an accident in which their own car is involved, a situation which falls completely out of the scope of existing regulations. The more a system becomes autonomous, the less a driver can be held responsible for any accidents (Marchant and Lindor 2012, 1326).

For AVs the right solution might be compulsory no-fault insurance, supplemented by a shift of liability to the manufacturer. A fault-based system, which relies on the care exercised by drivers, is obviously impractical for AVs, not only because these vehicles are designed to learn from mistakes, but also because it would be burdensome for the victim to prove the negligence of the driver. It was these considerations that motivated England and Wales to get rid of their fault-based (and driver-based) system in 2018.

Compulsory third-party liability insurance, strictly based on the liability regime, is a necessary step towards establishing a contributive system: every AV manufacturer would contribute to the cost of insuring all such vehicles (Ilková and Ilka 2017, 432).

For their part, insurance companies can influence the development of AVs by promoting different tariffs which reflect the accident rates of the AVs (Patti 2019, 153). Such a system would guarantee that losses are spread among users, and then calculated differently, leading to different premiums being paid by the manufacturers. In general, AVs are much safer than ordinary vehicles, but there are many things that can go wrong with automated driving. Misuse or manipulation of data, or cyber-attacks, could become frequent. Therefore, if the issue of liability is not settled conclusively, not only will litigation increase costs but it will be harder for insurers to collect their money. Thus, the only way to avoid skyrocketing insurance costs is to move from third-party insurance to a system where manufacturers are liable. Under this scheme, an injured party would be able to file a claim against the insurer every time there is an accident connected to a problem with an AV's normal functioning. Then the insurer could turn to the manufacturer for compensation.

Without definite liability rules, it is highly likely that parties will engage in case-by-case disputes over facts, such as whether or not the driver was reading a book at the time of the accident. While flexibility is an immense advantage for any legal system, leaving too much flexibility in this particular area will lead to arbitrary decisions. This is especially the case since accidents are expected to happen frequently enough to make it inefficient to deal with them individually or in accordance with an 'anthropocentric' standard based on a hypothetical human driver's point of view. Currently, most liability issues are settled out of court, and insurance companies can calculate how to tackle insured persons' claims efficiently. Accordingly, all parties—manufacturers, insurers, drivers and even pedestrians—would function within a system characterised by predictability, so that everyone would have the incentive to make use of automated driving.

If legislators avoid making the driver the focal point of the regulations, the manufacturer will almost certainly have to face an additional burden, at least until the manufacturing process becomes sufficiently safe. However, human safety should be the greatest incentive to use AVs, because if the idea is not seen as socially desirable, it will never see the light of day (Patti 2019, 137). Thus, competition between manufacturers will actually grow stronger as they will compete on the basis of the software embedded in AVs. Moreover, it is the manufacturers themselves that can influence the safety of the vehicles by means of the designs employed, and they can simultaneously transfer some of the costs back to the consumer (Lohmann 2016, 338).

Conclusion

It is clear that, as a social phenomenon, the use of AVs poses a great many problems. It is through law that the EU should urgently, and without any reference to the existing framework, provide us with answers. Even if the regulatory framework is not amended

or supplemented, it should at least be interpreted in an entirely new manner in light of the newly established relationships between the different stakeholders. This should take into consideration that the driver is no longer a driver and that doctrines such as the development risk defence cannot be applied.

Although from a procedural perspective the EU does not have time on its side, a timely reaction to the issues related to AVs could be used to help counter dissatisfaction with the Union as a 'regulatory monster'. This will only work, of course, if the EU manages to provide sufficient and appropriate protection for all of the interests involved. The legal framework cannot, on its own, support innovation, but it can deter the use of conventional vehicles. There will always be people who, for various reasons, prefer to drive. They will need further incentives to refrain from driving, and some of these can be provided by the law.

The most important measure to be recommended is that there has to be a single entity that is responsible for compensating victims. The manufacturer can act as such an entity, provided there is compulsory insurance for operating an AV. Technological development will grind to a halt if there is a risk that victims will not be sufficiently compensated. A model of no-fault insurance which is binding upon the owner of the AV could deter the use of conventional vehicles. At the same time, under a no-fault insurance scheme, enough uncertainty about liability would remain that litigation would not be excluded for more complex cases (Dima 2019, 15).

One thing is certain: the rules should be as separate as possible from already existing concepts. Moreover, they should be such that national legislation becomes a secondary tool for the most important issues that can be regulated within the EU. Although regulation is a part of the administrative realm, which allegedly hinders progress, in the immature world of self-driving vehicles, silence on the part of regulators may in fact put the brakes on the development of the market. It could also lead to more discrepancies between market expectations and reality and in turn to more administrative issues arising in the near future than would be the case if detailed regulations were introduced. Therefore, there should be a certain number of regulations. It is always best if the law refrains from too much intervention, but an interventionist approach would be better than one that gives rise to an unclear and unpredictable situation.

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