

Autonomy – a rider’s perspective

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This provides a perspective from the Motorcycle Action Group (MAG) on the legal framework for autonomous vehicles, from the context of motorcyclists as a road user group primarily committed to operating non-autonomous vehicles.

Background

Established on 1973 and representing 58,000 members, MAG is the recognised voice of motorcyclists in the United Kingdom. More broadly, MAG speaks for the interests of the 1.2 million social, commuting and delivery riders in the country.

MAG has followed the proposals for autonomising road transport with great interest. This is because a large proportion of riders specifically choose to use motorcycles or scooters as an enjoyable means of transport - requiring a high degree of operator input. This in turn leads to a personal sense of reward through the action of active riding.

Motorcyclists have taken an interest in the theory and application of autonomous technology, because most bikers anticipate interfacing as human vehicle operators with this robotic category of road vehicle. We believe our insights may be of use to the related legal agenda.

We share our perspective on autonomous vehicles in the hope that our extensively researched viewpoint is welcomed as progressive in terms of the level of consideration we’ve given to the challenges of autonomous vehicles (AVs); and the potential legal framework for the operation and regulation of this technology.

Structure of our input

Following the publication of the Law Commission’s 350 pages evaluation of the legal challenges generated by autonomous technology, their findings were laid out in the following four categories:

1. When is a vehicle self-driving?
2. How safe is safe enough?
3. What is the right data monitoring regime?
4. How should regulation be divided up?

MAG submits our perspective on all of these items individually. WE also add some additional comments on a number of other areas at the end of this submission.

1 When is a vehicle self-driving?

MAG's view is that the legal definition needs to operate on the basis that a vehicle is either autonomous or not, with nothing in between. It cannot be logical to have a 'partially' autonomous vehicle, because by any logic the driver will then still be responsible in part or whole for the behaviour of the vehicle. As long as the driver has a duty to oversee operations, they are the responsible operator.

In reality, there is no credible way of claiming a vehicle is truly autonomous if the driver can be made responsible for driving at any time. As such, and notwithstanding the 'five levels of autonomy' which are a useful way of describing what a vehicle can do for itself, a *fully* autonomous vehicle must be able to drive itself with zero input for road management decisions from any human occupant.

The Law Commission has considered a phase related to a 'transition demand.' MAG sees this as a slightly curious concept, as it assumes this transition can be made safely. MAG questions this assertion. We appreciate the Law Commission has given a lot of thought to arrangements by which one can go from fully autonomous to human control. This would require in-vehicle alerts and warnings so reliable that someone not paying attention is *made* to pay attention by the computer.

This transition demand phase is such an ambitious concept MAG questions the efficacy of such an approach. What if the 'driver' is asleep or in the middle of a heated argument - or in a meeting? There was also talk about how much notice the 'transition demand' procedure should take. A period of 10 seconds was suggested. An accident situation develops in a fraction of a second, and it's impossible to see how a 10 second transition process will help at such a very critical moment. The Law Commission recognises this perspective is, to use their own phrase, something of a 'fudge' - and indicated a hesitance to owning the solution to this key problem. MAG is happy to explore this intriguing issue and propose a more detailed analysis we have made of the problem and possible resolution from a legal perspective. In short, we propose that the legal framework is put in place, and it will be for technology and operator liability to fulfil the necessary requirements associated with the transition phase.

This leads to MAG's on-going and core worry. What happens if autonomous vehicles defer to unprepared human 'drivers' for urgent avoiding action in the event of a potential accident, perhaps due to an obstruction the computer can't interpret - like a stationary, narrow, hard to see, motorbike? Or what happens if the lightning reflexes of the software cause sudden braking to prevent an accident in front, causing a less robotic human to shunt the autonomous vehicle from the rear? These questions do have theoretical solutions. But those solutions are worrisome - like simply connecting up all the autonomous vehicles digitally, so they all know where they are and what they're doing, while putting 'keep out' signs on lanes to exclude human drivers. Again, MAG has considered the matter and conclude that the legal framework should outline the conditions that must be met for AVs to be able to operate as AVs in a mixed traffic environment. We are willing to share our thinking with the Law Commission.

2 How safe is safe enough?

MAG endorses the Law Commission's view that 'safe enough is NOT rightly an actuarial consideration.' This is the only correct way forwards. It's 'not OK' to make roads safer for one group at the cost of making them less safe for another group – a highly undesirable concept labelled the 'safer overall' argument. Thus, we agree with the Law Commission's verdict is that 'safety transfer' from one group to another has no place in the safety calculation. So, if autonomous vehicles are safer for their occupants, and reduce casualties overall, but increase casualties for, say, bikers – it is evidently a trade with no moral justification; and may even conflict with certain human rights obligations.

MAG was somewhat concerned that the Commission appears to hold the tenet that 'safe enough' is a political decision, not a legal one. This sidesteps the issue. After all, even if the question is left to politics, it is likely to be tested in court anyway – and a legal precedent would settle the matter. But even more significantly, a 'political decision' could ignore the undesirability of the 'safer overall' argument, at the cost of increased risk to the non-robot motorcycling community, and other road users too.

The Law Commission has also suggested safety assurance systems. This is an interesting idea in principle, but the details are all-important in the implementation of a proposal such as this. The Motorcycle Action Group is happy to participate in further discourse about how such a system might be implemented in practice.

3 What is the right data monitoring regime?

In terms of data-monitoring, if everything is monitored, nothing is private. In this scenario, where every journey can be recorded, privacy evaporates and is replaced by data storage. Maybe that doesn't matter to some. Anyone with reservations about the reach of the State into our personal affairs ought to be uncomfortable about what one might call *the eternal memory of the digital mind*.

MAG is not accepting that the State is capable of managing such a level of information with sufficient levels of security or integrity to make this mass collection of data safe. As such, MAG would be keen to discuss the data monitoring regime, especially as it relates to the interface between autonomous vehicles and manually controlled vehicles such as motorcycles.

4 How should regulation be divided up?

Turning to how regulation should be divided up, three main options take centre stage, as outlined by the Law Commission. One is called a 'Licensed Fleet Operator' system.' Next, an 'Automated Systems Driving Entity' (ADSE) has been cited. The third option is 'User in Charge.' Each creates a different liability regime.

There are also some technical implications here. A Licenced Fleet Operator is responsible for all its vehicles. By contrast, an ADSE system is limited to one vehicle. These are slightly different liability scenarios. MAG has extensively considered these user models. The model based upon 'fleets' as covered in the Shift report creates a collectivised responsibility for a set of vehicles. While this is an interesting approach, MAG believes it really is a subset of the ADSE option as far as liability is concerned, because it doesn't really make any difference to the liability picture if ADSE applies to one vehicle or a fleet.

Both these options are well described as the purchasing of a service, not a vehicle, so the user has no responsibility for driving - or for the vehicle. This is highly significant in terms of liability. If you're not in charge, you can't be liable, but someone else still has to be. (If you *are* in charge, it's not autonomy). There's a big incentive to reduce the risk of costly accidents for those liable, for instance, for a computer foul up. Thus, the legal terms have to be absolutely robust in terms of how liability is categorised, without any temptation to relax conditions or make these conditions vague to make them easier to implement at the cost of legal clarity.

AN obvious inference is that all this could tempt the autonomous sector to try to get unpredictable human drivers out of the way of robocars. MAG does not subscribe to the view that simply segregating robot vehicles and human controlled vehicles is the solution. It's a 'dodge' and should be avoided at all costs.

To summarise our view so far, the ADSE system is the simplest for the occupant and the most challenging for the legal framework. For the operator to be liable we need to define who the operator is. It's something of a moot point to consider whether the operator is a fleet owner or the designer and constructor of the vehicle.

MAG suggests liability here will always reside with the entity with the capability of remotely controlling the vehicle. It's really as simple as that. For this version to work properly, we believe there can be no default option of manual override in the vehicle itself. This creates other problems - and those could be a big psychological barrier to the attractiveness of the vehicles to potential occupants, but that is beyond the scope of the Law Commission's review. MAG believes that this model presents major technical issues that have not been solved yet, but that a legal framework could provisionally be established to anticipate the point at which the technology catches up.

Such legislation needs to think about the reality of what needs to be legal addressed, without inadvertently building in assumptions in the framework that could be made obsolete by technology, or which compromise the rights of riders and other road users. MAG is happy to contribute to the development of this framework, given that we have already committed considerable time to this very issue across the last 18 months.

Autonomy is theoretically possible even for motorbikes. An autonomous motorcycle has been raced against a human rider, with impressive results. Nevertheless, riders tend to ride for the enjoyment of the control of the vehicle. So, we can assume whatever happens, most bikers won't be going for autonomy any time soon. Thus, for now riders will be users in charge for the foreseeable future. In this context, the 'user in charge' model requires no additional regulation above what is in place at present. If the user can control the vehicle in any way, they must be liable for the function and behaviour of the vehicle. MAG does not see any scenario where this is compromised as a model.

In conclusion for this section, the only framework development required is for the ADSE scenario. Everything fits into either this category or the 'user in charge' model. That makes it easy to define what needs a legal framework, though designing that framework will take careful consideration, and must incorporate 'future proofing.'

Other considerations

Vehicle safety

The Law Commission has considered a two-track system to enable manufacturers to choose whether to get type approval for the vehicle under an international framework or a national scheme. This would also incorporate the potential need for user class definitions in the UK. With that come the approvals necessary for road use. We suggest this categorisation needs to be carefully assessed and made as simple as possible. MAG perceives a risk of over-complexity here, because it is easy to gravitate towards listing as many different design parameters as one can imagine.

MAG suggests the categorising should be the legal minimum needed to define fully autonomous vehicles. Everything else can and should be included in existing categories. Indeed, whether a new safety assurance scheme would deliver the results ascribed to it by the Law Commission is questionable. MAG believes that safety assurance should be part of the categorisation and liability parameters. A separate safety assurance scheme is not really useful as a 'stand-alone' framework. It is better to ensure that minimum standards of safety are included in the liability rules, rather than in separate safety standards. It's simpler and reflects more closely the practical considerations of road driving. It can also incorporate software updates, cybersecurity risks and updates to maps, all of which can be included explicitly in terms of the road safety standards required in the standards. MAG is willing to assist with the evolution of this framework, with a view to making it as practical as possible.

User and fleet operator responsibilities

The Law Commissions summarises two regulatory categories. In the first, it is suggested that autonomous vehicles can only act autonomously on certain 'autonomy approved' road space – such as motorways. They would then default to manual control elsewhere. This creates the confusion of mixed liability. As already outlined, MAG suggests such a regime creates extremely problematic grey areas, especially at the point of transition. It might be achievable to have a

logical and implementable system. This needs work to make sure that liability is NOT passed from one entity to another in complex, precedent-setting legal battles in courtrooms. If this occurs, it is very likely the best resourced protagonist will win, and this is not a healthy way to define such precedents.

The second category the Law Commission has suggested is 'entirely remotely operated' machines operating as part of a licensed fleet with users classified as merely passengers. As already stated, MAG does not believe having a separate category of this nature has particular merit. The definition must be based simply on where the remote operator is based in practical terms. Their employer is the liable entity – this also applying to situations where the remote operator is self-employed. Whether one or many vehicles are controlled by a single entity is not relevant to the principles involved here.

Fleet News, which as the name suggests covers matters relating to operators of large numbers of vehicles, announced enthusiastically, 'already, outcomes from the Shift report are being used as part of Project Endeavour - a project designed to accelerate and scale the adoption of AV services across the UK through advanced simulations alongside trials on public roads across three major cities.' The reason for such eagerness is simple: saving money. Robot drivers save salaries versus human drivers, so no wonder the market is keen to shift from 'cabbies to computers.' MAG observes the evident reality that the pressure to make these savings cannot be allowed to cause a short cut in getting the regulations right.

Shifting towards a no blame safety culture for AVs

The Law Commission has raised the prospect that when a self-driving vehicle is in operation the user-in-charge will not be criminally responsible for any accidents that do occur. 'As there will therefore be no driver, society will not have someone to blame in the same way that occurs for conventional vehicles.'

Despite the Law Commission's aspiration to 'move away from blame, and towards a learning culture, in which adverse events and accidents lead to the improvement of systems for the future,' this seems optimistic to the point of wistfulness.

Even in the aviation sector, the spectre of blame is ever-present following an accident. With the vastly higher frequency of accidents on roads versus in aviation, it is unrealistic to think a system will survive even a day before the blame game begins to take hold. MAG is happy to share our thoughts on how the reality will play out, and what might be done to mitigate the temptation to repeatedly try and push the blame onto manual human vehicle operators – a temptation made more serious as an issue by the asymmetrical access to legal resources between, say, a fleet operator and an individual motorcyclist or car driver manually in control of their car.

In response to the Law Commission's invitation for 'views on whether to review the possibility of new corporate offences where wrongs by a developer of an ADS resulted in death or serious injury,' MAG advises that new corporate offences are not really necessary. The only real need here is a resolution of the question of

liability. Wherever that resides, the existing laws of the highway should be able to do the rest without a parallel framework of additional laws. The inclusion of autonomous vehicles could even be achieved with something as straightforward as a Statutory Instrument with an associated Schedule. MAG is happy to share our thinking on this matter.

Conclusion

The Motorcycle Action Group embraces the benefits of autonomy – which can reduce risk in some circumstances and improve the effective use of travelling time.

We believe that the definition of autonomous travel should be treated as binary – either a vehicle is operating autonomously, or it is not, and the idea that there can be a rapid transition from one to the other is not realistic.

Any prospect of lane segregation must be achieved at the cost of encroaching on road space currently used by manually controlled vehicles, and the idea of any such segregation to resolve the obvious and as yet unsatisfied question of liability or human/robot interface issues is not acceptable to motorcyclists.

Longer term, it may be possible that autonomous technology reaches the level at which there is truly safe co-existence between human and robot control vehicles. That time is not with us yet, and in the interim any legal framework must never put the ‘rights’ of robot vehicles above the rights of humans, whether on two three or four wheels (assuming that in the future we even need roads!).

MAG is ensuring we’re at the table for this debate, because we still harbour the idea that vehicles are something to be savoured rather than merely employed. This could turn out to be a challenging debate, if the rise of the machines swipes road space from ‘traditionalists’ who regard the journey itself as part of the enjoyment – and who don’t wish to surrender their joy of riding to the ghost in the machine.

The Motorcycle Action Group is ready and willing to work with the Law Commission on the fascinating legal, practical and philosophical aspects of legislating for autonomy. We hope this offer will be accepted.

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