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Autonomous vehicles in Québec: unanswered questions

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According to a recent study, 25% of new cars sold around the world will be self-driving by 2035[1]. A group of researchers from Princeton University estimates that by 2035-2050 over half of American cars will be self-driving[2].

Smart cars are currently being sold in Québec and their advent is sure to have repercussions on several players.

Self-driving cars

Smart cars use information and communication technology in accident prevention systems with varying levels of automation.

In simple terms, a smart car uses a control system equipped with an algorithm that predicts how the car should react. This sophisticated system is connected to satellites and is continually updated to adapt to new situations by detecting new risks.

There are six levels of automation for cars[3]:

> Level 0 – no automation;
> Level 1 – driver assistance;
> Level 2 – partial automation, which provides automatic assistance and acceleration/braking functions but requires that the human driver retain control over all dynamic driving tasks;
> Level 3 – conditional automation, in which dynamic driving tasks are performed by the control system but the human driver must remain available at all times;
> Level 4 – high automation, when a vehicle's control system provides total control of all driving tasks, even in critical safety situations; and
> Level 5 – full automation, when a vehicle performs all driving tasks alone, without the possibility of human intervention.

Cars are considered self-driving or autonomous as of Level 3, when the control system can perform dynamic driving.

Québec's *Automobile Insurance Act*

The Québec *Automobile Insurance Act* (hereinafter the "**Act**") sets out a no-fault regime[4] which provides that the Société de l'assurance automobile du Québec compensates victims of automobile accidents who have suffered bodily harm regardless of who caused the accident. However, under

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the Act, the owner is liable for material damages caused by his vehicle and cannot escape liability unless he proves fault by the victim or a third party, or a superior force.

There is some legal uncertainty regarding self-driving cars in Québec since they are not covered by the current legislation.

In 2016, a pilot project covering self-driving cars in Canada was presented by the Ontario government. In addition to providing an investment by the province in research on autonomous automobiles, the project resulted in a change to the Ontario *Highway Traffic Act*[5] through the enactment of Regulation 306/15[6]. Although that Regulation allows automated cars to be driven in specific situations, it did not change the liability rules under the Ontario law[7].

Self-driving cars should be regulated in Québec for two reasons: they are not yet covered by the law and several liability issues would arise in the event of an accident. Who will be liable for an accident caused by a self-driving automobile—the manufacturer or the driver? Who should bear the risk?

The manufacturer's liability in Québec

In Québec, the product liability regimes in the *Civil Code of Québec*[8] and the *Consumer Protection Act*[9] include a presumption against the distributor, the professional seller and the manufacturer when the buyer establishes that an item had a latent defect or failed prematurely compared to similar items, which shifts the burden of proof onto the manufacturer.

To rebut this presumption, a manufacturer cannot rely on its ignorance of the defect or even wear and tear of the item. Only two defences are available[10]:

1. proof of causal fault on the part of the buyer or a third party, or a superior force; or
2. proof that it would have been impossible to detect the defect given the state of scientific knowledge at the time the item was put on the market.

Comments

The issue of when liability will transfer from the driver of an autonomous vehicle to the manufacturer is unclear. However, we can expect that the manufacturer's level of liability will increase pursuant to the incremental use of technology in the automation of automobiles.

The very design of some autonomous vehicles entails that they will no longer be controlled by a human being, who will become a passenger as the vehicle's control system takes over the driving. The manufacturer of the vehicle could henceforth be fully liable in the event of an accident, which would result on the application of the Québec product liability regimes.

If the manufacturers of autonomous vehicles were to be liable in the event of an accident, the recourses could lead to highly complex litigation. The subcontractors of the manufacturer of an autonomous vehicle, such as the company which designed the car's algorithm and the company responsible for data transmission, could also be liable.

The transfer of liability onto the manufacturers of autonomous vehicles could also have repercussions in terms of insurance. Both the determination of insurance premiums for drivers and manufacturers and the underwriting of insurance for these parties could be affected, depending on who will bear the risk.

The arrival of autonomous vehicles could also lead to an influx of new players in automobile

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insurance. For example, Tesla currently has an insurance policy in Australia adapted to one of its smart cars[11].

Conclusion

Accident statistics show that self-driving vehicles will lead to a decrease in traffic accidents, 93% of which are currently attributable to human error in the U.S.[12].

Autonomous vehicles will not only change how we travel, they will also impact Québec's legislation governing liability in case of automobile accidents.

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1. Boston Consulting Group, (2016), *Autonomous Vehicle Adoption Study*.
2. Jane Bierstedt et al., (2014), *Effects of Next-Generation Vehicles on Travel Demand and Highway Capacity*, FP Think Working Group.
3. *Pilot Project - Automated Vehicles*, O Reg 306/15, s. 2.
4. *Québec Automobile Insurance Act*, CQLR c. A-25, s. 108 and ff.
5. *Highway Traffic Act*, RSO 1990, c H.8.
6. Pilot Project - Automated Vehicles, O Reg 306/15.
7. *Insurance Act*, RSO 1990, c I.8, s. 267.1.
8. *Civil Code of Québec*, CQLR c. CCQ-1991, art. 1726 and ff.
9. *Consumer Protection Act*, CQLR c. P-40.1, s. 38.
10. *ABB Inc.* v. *Domtar Inc.*, [2007] 3 SCR 461, par 72.
11. See tesla.com
12. John Maddox, *Improving Driving Safety Through Automation*, Congressional Robotics Caucus, National Highway Traffic Safety Administration, 2012.

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