

ARTIFICIAL ETHICS – SELF-DRIVING CARS MAKING LIFE AND DEATH DECISIONS

by Diana L. Martin

As we begin a new year, we are all no doubt grateful for the blessings in our lives, including the ability to achieve justice for our clients through the legal system. But, to be honest, aren't you a little disappointed that it is now 2020 and there is no real prospect of traveling by flying car in sight? Many of us grew up believing 2020 was the year cars would take flight. Now some manufacturers estimate 2025 is the earliest commercial flying vehicles will hit the market, while analysts believe it could take much longer.¹

We may not have flying cars yet, but the age of the self-driving car has begun. To many, the idea of sitting passively in a car that does the hard work of navigating through traffic is appealing. But plaintiffs' lawyers likely find the idea terrifying. We know how companies cut corners and send products to market too soon without adequate safety testing. We know how manufacturers have been willing to risk the safety of consumers in order to maximize profits by using cheaper tempered glass instead of laminated glass,² and by using airbag inflators that were known to be ticking time bombs.³ And we know manufacturers have been all too willing to hide dangerous product defects from the public.⁴ One can easily imagine how self-driving vehicles that are not subject to human direction and control will lead to increased opportunity for the manifestation of product defects.

Truly self-driving cars will not only have the same potential for traditional product defects as other automobiles, like faulty seat belts, bad airbags, etc., but there will also be potential for defect in the cars' "brains" — the artificial intelligence programming that will enable these vehicles to completely eliminate the need for a driver. Part of this programming must include a system of artificial ethics to guide a self-driving vehicle when making life and death decisions.⁵

Consider the trolley problem you may have debated in a college philosophy course:

A train hurtles along a track, its freight cars rattling ominously in the wind. Up ahead, a railroad spur splits the path in two directions — but both routes augur death. On one side of the fork, a group of five workers are absorbed in the repetitive labor of track maintenance, apparently unaware of the rapidly approaching locomotive. If the train continues along its current path, they will all be crushed. On the opposite track, a lone, similarly oblivious laborer is performing the same task. He is safe, for now — unless someone were to reroute the train.⁶

While students have long debated what is the ethically "right" action to take in this situation — remain passive and let the train kill the five workers or take action in order to limit the loss of life by redirecting the train to kill the lone worker — self-driving vehicles will need to be programmed with the action the manufacturer desires. For instance, will a manufacturer program its self-driving vehicles to preserve the lives of the vehicle's passengers above all others? If a vehicle with a single passenger is confronted with hitting a pedestrian in the roadway or swerving



and hitting a guardrail, will the vehicle weigh the potential for harm to be caused by each possible outcome and choose the path likely to result in the least injury? What if the vehicle's only passenger is a child and the pedestrian is jaywalking or a vagrant? Will those factors weigh into the vehicle's decision?

MIT researchers conducted a survey that asked individuals for their opinions on how a self-driving vehicle should react in such situations.⁷ Receiving nearly 40 million opinions from around the world, they found a global preference for saving the largest number of lives, prioritizing the lives of the young, and valuing humans before animals.⁸ There was also a preference for sparing those following the law over jaywalkers.⁹ Earlier surveys also indicated people would prefer to be in a self-driving vehicle that would prioritize their safety over others,¹⁰ which is how Mercedes announced it will program its self-driving cars.¹¹

On March 18, 2018, a self-driving Volvo operated by Uber struck and killed a homeless woman who was jaywalking on a road in Tempe, Arizona.¹² An Uber driver was in the vehicle, but was not in control of the vehicle or paying attention to the

road when the vehicle encountered the pedestrian.¹³ Six seconds before the collision, the Volvo recognized something was in the road, but could not identify what it was.¹⁴ Less than two (1.3) seconds before impact, the Volvo recognized the object in the road as a person, but it was unable to stop because Uber had programmed it not to brake in emergencies — only the human driver was allowed to do that.¹⁵ It appears there would have been no safety risk to the Uber driver if the vehicle avoided hitting the pedestrian, so, presumably, the vehicle would have attempted to do so if Uber had not disabled that part of the vehicle's programming. But we don't know how the vehicle was programmed to respond in the event avoiding the collision with the pedestrian did pose a danger to the driver or others.

As self-driving vehicles become more prevalent and accidents occur, there will undoubtedly be situations in which litigation is focused on the performance of the vehicle as directed by its programming. Will juries get to decide whether the vehicles' programming meets a reasonable person standard? Will each side need to call an expert ethicist to testify regarding the ethical standard of care and alternative programming instructions that were available to the manufacturer? Your guess is as good as mine as we enter this brave new world of self-driving, but not flying, vehicles. ■



DIANA L. MARTIN

is of counsel at Cohen Milstein, and a member of the firm's complex tort litigation and consumer protection practice groups. Martin's practice focuses on appellate litigation involving complex product liability, consumer class, mass tort, and managed care litigation. Martin began her career as a clerk for the Honorable Martha C. Warner in Florida's Fourth District Court of Appeal. She has written numerous legal articles for various publications, including *Trial Magazine*, *The Florida Bar Journal*, and the Florida Justice Association's *Journal*. Martin also co-authors *Florida Insurance Law and Practice*, an annual publication by Thomson/West. Outside of private practice, Martin serves as Audit Committee chair of Families First of Palm Beach County.

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¹³ *Id.*
¹⁴ *Id.*
¹⁵ *Id.*