Self-Driving Vehicles and Questions of Product Liability

By Denis F. Alia

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Vehicle automation is defined based on the extent to which a car's integrated technology performs a variety of driving functions with or without the presence of a human operator behind the wheel. Levels of automation fall on a broad spectrum, with vehicles that provide human drivers with simple warnings or alerts at one end, to vehicles that are considered fully autonomous at the other end. Vehicles first included automated technology as early as the 1950s, and that technology continues to advance rapidly today. Due to these rapid technological advances, legislatures and judiciaries across the United States are working to pass regulations and develop a body of precedent to respond to questions of products liability raised when automated vehicles are involved in accidents. Although there are few clearly-defined legal conclusions at the intersection of products liability and autonomous vehicles today, those that exist illustrate courts' reluctance to apportion liability to autonomous vehicle manufacturers. Nonetheless, autonomous vehicle litigation today, as well as the mounting body of law concerning products liability and general automation technology, raises interesting questions the defense bar should consider as it continues providing effective defense strategies for its clients.

Vehicle Automation

Vehicle automation is generally defined as a vehicle's technological ability to perform the functions of a human driver with or without human aid. *See* SAE Int'l, J3016 APR2021, Surface Vehicle Recommended Prac. 6 (2021); Alexander S. Gillis & Ben Lutkevich, *Self-Driving Car (Autonomous Car or Driverless Car)*, TechTarget, *https://www.techtarget.com/searchenterpriseai/definition/driverless-car* (last updated June 2024). SAE International (f/k/a the Society of Automotive Engineers), in conjunction with the International Organization for Standardization

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("ISO"), recommends standards by which vehicle automation is defined. *See* Surface Vehicle Recommended Prac., *supra*, at 1-2; *About SAE International*, SAE Int'l, *https://www.sae.org/about/history* (last visited July 8, 2024). A vehicle considered "fully autonomous" or "self-driving" is one that operates completely without the aid of a human driver. *See* Surface Vehicle Recommended Prac., *supra*, at 34; Lutkevich, *supra*. Because those cars are generally not available in today's market, SAE International prefers the term "automation" to describe the technological abilities of cars produced in the US today. *See* Surface Vehicle Recommended Prac., *supra*, at 34; *Automated Vehicles for Safety*, NHTSA, *https://www.nhtsa.gov/technology-innovation/automated-vehicles-safety#resources* (last visited July 8, 2024).

Levels of Automation

SAE International defines six levels of vehicle automation; the levels range from L0, where a human driver performs all driving functions with some technological assistance, to L5, where the vehicle is fully autonomous. *See Automated Vehicles for Safety, supra; What is an Autonomous Car?*, Synopsis, *https://www.synopsys.com/automotive/what-is-autonomous-car.html* (last visited July 8, 2024). As previously mentioned, L0 vehicles provide basic technological assistance to the driver, such as warnings and alerts, like blind-spot monitoring. *See Automated Vehicles for Safety, supra;* Surface Vehicle Recommended Prac., *supra*, at 6. L1 vehicles assist the driver with acceleration, braking or steering, but not both, while L2 vehicles assist the driver with those three tasks simultaneously. *See Automated Vehicles for Safety, supra.* Some of Tesla's models can be classified as L2 vehicles, however these vehicles also require a driver-monitoring system (i.e., touch-sensitivity on the steering wheel). *See Automated Vehicles for Safety, supra.* L3 vehicles, which are generally unavailable in the US today, assist the driver by controlling specific driving functions such as navigating through traffic at low speeds. *See* Surface Vehicle Recommended Prac., *supra*, at 31; *Automated Vehicles for Safety, supra.* In an L3 vehicle, the human driver must monitor the vehicle's movements at all times. *See Automated Vehicles for Safety, supra.* L4 and L5 vehicles, which are unavailable in all car markets today, are essentially fully autonomous. *See Automated Vehicles for Safety, supra.* An L4 vehicle performs many driving functions, without human intervention, in specific geographic areas, whereas L5 vehicles perform all driving functions, anywhere, without human intervention. *See Automated Vehicles for Safety, supra*; Surface Vehicle Recommended Prac., *supra*, at 26, 32. Currently, L4 vehicles are being tested for market production, while L5 vehicles will likely remain in development for at least the next decade. *See* Mark Fagan et al., Autonomous Vehicles Are Coming: Five Policy Actions Cities Can Take Now to be Ready 6 (2021).

A Brief History of Vehicle Automation

Automation technology first appeared in vehicles in the 1950s with the advent of safety features such as cruise control and anti-lock brakes. *See Automated Vehicles for Safety, supra.* Shortly thereafter, in 1966, the National Traffic and Motor Vehicle Safety Act was passed in the US, mandating the first set of rules for vehicle safety. *See* National Traffic and Motor Vehicle Safety Act of 1966, Pub. L. No. 89-563, 80 Stat. 718. In the early 1980s, a German company developed a vehicle that used a computerized vision system to operate on the highway, without traffic, at highway speeds. *See* James M. Anderson et al., Autonomous Vehicle Technology 56 (2016). By the 1990s, technology in the US further advanced the pursuit of self-driving cars when researchers in California tested a car that was guided by magnets embedded into the highway. See *id.* It was around this same time that Congress directed the Department of Transportation and the National Automated Highway System Consortium to develop an "automated highway system," while companies in Europe and Japan developed adaptive cruise control functions that further advanced vehicle automation. *See* Keith Barry, *Big Bets and Broken Promises: A Timeline of Tesla's Self-Driving Aspirations*, Consumer Reps. (Nov. 11, 2021), *https://www.consumerreports.org/cars/autonomous-driving/timeline-of-tesla-self-driving-aspirations-a9686689375/#:~:text=Big%20Bets%20and%20Broken%20Promises%3A%20A%20Timeline%20of,2014%20...%208%20October%202015%20...%20More%20items.* These advances paved the way for Tesla to create their "Autopilot" feature, which debuted in the mid-2010s and continues to be refined to this day. *See id.* This technology provides a variety of automated assistance to the human driver including a self-driving system where the human driver is still responsible for most driving functions. *See id.*

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Legislating Vehicle Automation

At least 27 states, and the District of Columbia, have enacted legislation relating to autonomous vehicles. *See* Justin Banner, *Are Self-Driving Vehicles Legal in My State?*, Motortrend (Jan. 6, 2023), *https://www.motortrend.com/features/state-laws-autonomous-self-driving-driverless-cars-vehicles-legal/* (stating 27 states have enacted autonomous vehicle legislation); *Autonomous Vehicles – Self-Driving Vehicles Enacted Legislation*, NCSL, *https://www.ncsl.org/transportation/autonomous-vehicles#state* (last updated Feb. 18, 2020) (stating 29 states have enacted autonomous vehicle legislation). At least six states regulate autonomous vehicles by executive order, and at least five states regulate autonomous vehicles by both legislation and executive order. *See Autonomous Vehicles – Self-Driving Vehicles Enacted Legislation, supra.* Of the states with autonomous vehicle legislation, California's regulations are among the strictest, while Florida's are more lenient. *See* Roy Furchgott, *Public Streets Are the Lab for Self-Driving Experiments*, N.Y. Times (Dec. 23, 2021), *https://www.nytimes.com/2021/12/23/*

business/tesla-self-driving-regulations.html?searchResultPosition=24.

As an example, California requires a driver to be "seated in the driver's seat, monitoring the safe operation of the autonomous vehicle, and capable of taking over immediate manual control of the vehicle in the event of an autonomous technology failure or other emergency." Cal. Veh. Code § 38750(b)(2) (West 2022). In contrast, Florida does not require the presence of a human operator in a car that is "fully autonomous." *See* Fla. Stat. Ann. § 316.85 (West 2019); Evan P. Dahdah, *An Attempt to Control What Controls Itself: Unraveling Florida's Autonomous Vehicle Laws*, 38 Trial Advoc. (FDLA) 31, 34-36 (2019). Moreover, when compared to Florida, California more clearly apportions liability to vehicle manufacturers in the event that the autonomous driving system fails, causing damage. *See* Cal. Veh. Code § 38750(G)(3) (West 2022); Dahdah, *supra* at 36. California law requires manufacturers to certify that their autonomous vehicles have been tested on public roads in compliance with state testing standards, *see* Cal. Veh. Code § 38750(G)(2)-(3) (West 2022), while Florida law protects manufacturers against defects in the autonomous vehicle technology caused by third-party modifications. *See* Fla. Stat. Ann. § 316.86 (West 2016); Dahdah, *supra* at 36.

Case Law Survey of Self-Driving Cars and Products Liability

As a result of the continuous technological leaps being made in the autonomous vehicle industry, there are few, if any, settled legal conclusions regarding products liability and autonomous vehicles. *See* Julia Doskoch, Note, *"Your Honor, the Car Crashed Itself": Navigating Autonomous Vehicle Liability in the Age of Innovation*, 2023 B.C. Intell. Prop. & Tech. F.J. 1, 5 (2023); Atilla Kasap, *States' Approaches to Autonomous Vehicle Technology in Light of Federal Law*, 19 Ohio State Tech. L.J. 315, 321 (2023). Some unsettled questions include whether, and to what extent, federal law preempts state regulation when applied to products liability cases, *see* Kasap, *supra*, at 410, and to what extent federal regulations, rather than common law tort theories, are better equipped to adapt and decrease the risk of autonomous vehicles crashes. *See generally* Kevin M.K. Fodouop, Note, *The Road to Optimal Safety: Crash-Adaptive Regulation of Autonomous Vehicles at the National Highway Traffic Safety Administration*, 98 N.Y.U.L. Rev. 1358 (2023) (proposing development of data tracking system the NTSB could use to adapt and improve autonomous vehicle regulations to reduce risk of autonomous vehicle crashes). Although the question of who is liable when an autonomous vehicle crashes and causes damage is currently academic in nature, *see* Doskoch, *supra*, at 6-7, the several cases that are available generally illustrate that, currently, courts are reluctant to apportion liability to manufacturers when an autonomous vehicle is involved in an accident.

In some cases where an autonomous vehicle was involved in an accident, courts dismissed the matters before addressing products liability issues or theories specifically relating to the autonomous vehicle at issue. For example, in *Wang v. Tesla, Inc.*, 20-CV-3040 (NGG) (SJB), 2021 WL 3023088 (E.D.N.Y. July 16, 2021), the court dismissed the case because the Plaintiff insufficiently pleaded fraud and failed to certify an alleged class. Additionally, in *Umeda v. Tesla Inc.*, No. 20-CV-02926-SVK, 2020 WL 5653496 (N.D. Cal. Sept. 23, 2020), the court dismissed the case based on *forum non conveniens*. For those cases where questions of liability and other issues relating to autonomous vehicles were reached, courts decided against apportioning liability to vehicle manufacturers for various reasons.

In California, a Car Manufacturer is not a "Driver"

In *Escudero v. Tesla Inc.*, No. RG21090128, 2021 WL 2772434 (Super. Ct. Cali. Feb. 26, 2021), a California court dismissed a negligence action, with prejudice, after concluding that liability rests on the human driver physically operating the car, not the car's manufacturer, even if the car operated mostly without the driver's aid. Id. Interpreting the California State Vehicle Code, the court concluded that a car's "driver", even one operating autonomously to a certain extent, is the person who is in "actual, physical control of the vehicle." *See id.* The court reasoned that, without precedent establishing otherwise, they could not apportion liability to the car's manufacturer when the human occupant had the opportunity to override the vehicle's automation features. *See id.*

Marketing Materials do not Constitute a Warranty

In *Son v. Tesla Motors*, No. SACV 16-02282 JVS, 2019 WL 4238874, at *5-6 (C.D. Cal. Apr. 15, 2019), the Federal District Court for the Central District of California dismissed a breach of contract action against a car manufacturer because the marketing materials for a car's automation features did not create a warranty between the manufacturer and the consumer promising that the car would stop itself to prevent a collision. Id. Plaintiff alleged that the car manufacturer's marketing materials, advertising automatic breaking and forward collision warning, warranted that the car would actually prevent a forward collision. *See id.* at *1, *4-6. The court dismissed the case without prejudice, reasoning that the marketing materials indicated only that the automation features were *designed* to prevent collision; those materials did not promise that the automation features would *actually* prevent a collision. *Id.* at *5-6 (emphasis added).

Consumers do not Expect an Autonomous Vehicle to Prevent a Collision

In *Youngberg v. Gen. Motors LLC.*, No. 20-339-JWB, 2022 WL 3925272, at *3 (E.D. Okla. Aug. 24, 2022), the Federal District Court for the Eastern District of Oklahoma dismissed a product liability claim because a reasonable consumer in 2013, the year of the vehicle involved in the accident at issue in this case, would not expect an autonomous vehicle to avoid a collision. Id. Rather, a consumer in 2013 would expect that responsibility to fall to the vehicle's human driver. *See id.* In this case, Plaintiffs alleged that the vehicle in question was defectively designed and unreasonably dangerous because it was not equipped with automation technology such as a forward collision warning system and an automatic breaking system, even though it was technologically and economically feasible for the vehicle's manufacturer to install those systems in the vehicle at issue. *See id.* at *1-3. The court concluded that, even if it was technologically feasible to make the vehicle at issue safer by providing some level of

automation, that fact alone is insufficient to establish that the vehicle was unreasonably safe when it let the manufacturing plant. *See id.* at *4. Consumers in 2013 would expect human drivers to take responsibility for front-end collisions while traveling at highway speeds rather than a vehicle's automatic safety features. *See id.*

Product Liability and Automation: Beyond Vehicle Automation

Beyond vehicle automation, artificial intelligence ("AI") is one technological development where product liability and automation may intersect. Foundationally, AI, and AI enabled technologies, are designed to function like a human brain and, using sophisticated computer software, learn new tasks, engage in reasoning, and problem-solve to complete new functions. *See* Kevin Roose & Cade Metz, *How to Become an Expert on A.I.*, N.Y. Times (Apr. 4, 2023), ***https://www.nytimes.com/article/ai-artificial-intelligence-chatbot.html?searchResultPosition=16.*** Automation alone is distinct from AI because, unlike AI, automated systems do not learn how to complete tasks, but rather their systems are manually configured to complete certain tasks. *See* Jody Glidden, *Understanding What Artificial Intelligence is, and what It's Not*, Forbes (Apr. 14, 2021), ***https://www.forbes.com/sites/forbesbusinesscouncil/2021/04/14/understanding-what-artificial-intelligence-is-and-what-its-not/?sh=7d8b758248cd.*** However, when combined, AI and automation create an intelligent form of automation, where an automated machine can learn how to complete certain tasks based on an integrated AI system. *See What is Automation?*, IBM, ***https://www.ibm.com/topics/automation*** (last visited July 8, 2024). For example, car manufacturers may use intelligent automation to regulate a robotic system's production of vehicles based on an integrated AI's analysis of supply and demand. *See What is Intelligent Automation?, supra.*

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Product liability and intelligent automation may intersect when courts apportion liability to AI manufacturers when their products fail to function as promised. For example, in *Conn. Fair Hous. Ctr. v. Corelogic Rental Prop. Sols., LLC*, 369 F. Supp. 3d 362 (D. Conn. Mar. 25, 2019), the court held the Defendant software company liable because its software violated the Fair Housing Act ("FHA") by discriminating against individuals with arrest records. *See id.* at 372. Here, Defendant's software analyzed a tenancy applicant's criminal record and, using an algorithm, determined that the applicant was disqualified to become a tenant because of a prior arrest. *See id.* at 367-68. In a series of publications, the US Department of Housing and Urban Development ("HUD") issued guidance stating that landlords who own federally-assisted housing units cannot disqualify housing applicants based on arrest records alone, because arrest records disproportionately affect African American and Hispanic rental applicants. *See id.* at 371. Therefore, use of those records to screen housing applications violates the Fair Housing Act ("FHA"). *See id.* Because Defendant held out its software as one capable of screening housing applications in compliance with the FHA, and because that software failed do so, causing the landlord to disqualify a housing applicant in violation of the FHA, the court apportioned liability to the Defendant for those discriminatory actions. *See id.* Defendant's liability was partially based on agency principles, where the court concluded that the Defendant, in employing its tenant screening software, acted as the landlord's agent, and was liable as the landlord's agent. *See id.* at 373-74.

Conclusion

There are few, if any, well-defined legal conclusions to questions regarding autonomous vehicles and products liability. However, as the current cases discussed above illustrate, courts are reluctant to apportion liability to vehicle manufacturers when their vehicles are involved in accidents for a variety of reasons. In developing precedent to apply to current issues of products liability and vehicle automation, courts around the country are: (1) defining ambiguous terms in statutory compilations to better determine who is liable when an autonomous vehicle is involved in an accident; (2) applying contract law to examine alleged warranties made by autonomous vehicle manufacturers; and (3) courts are looking to common law tort theories, such as consumer expectations, when apportioning liability. With an industry that is rapidly changing, and a corresponding body of precedent developing just as quickly, it is important for defense counsel to take each of these considerations in turn and ask questions such as: (1) how will changes to state autonomous vehicle regulations effect my client's defense strategies?; (2) what warranties must my client navigate to ensure accurate representations as to their products' level of automation?; and (3) how will consumer expectations change as to their reliance on vehicle automation to prevent crashes and other various accidents? These and other questions will be important for the defense bar to consider as it continues providing effective defense strategies for its clients in this age of technological advances in vehicle automation.

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