Professional Perspective


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Part 1: State Tort Law Could Impede The Development of Autonomous Vehicles

The automotive industry is in the early stages of a technological revolution. Sensors and software are gradually replacing human drivers. Eventually, autonomous vehicles will enhance vehicular safety and expand human mobility.

Before these benefits can be fully realized, however, substantial work remains to be done. Manufacturers are exploring different approaches to automation and it is not yet clear which automated systems hold the most promise. Consequently, despite the considerable progress already made, years of engineering and testing lie ahead.

Technological success and public acceptance will depend on a thorough examination of the various alternatives. It is only through the study of different systems under a wide array of actual operating conditions that the relevant stakeholders—manufacturers, regulators, insurers, and the driving public—can acquire the data needed to ensure the development and deployment of autonomous vehicles that are safe, secure, and marketable. This will require a legal environment that, at least during the transitional period, allows robust experimentation under real-world conditions.

The threat of state-law tort claims could impede the development of autonomous vehicles. If, for example, an individual injured in a specific way could hold a manufacturer liable for failure to install a particular device or failure to employ a particular algorithm despite the manufacturer's adoption of an alternative approach that reduced the aggregate but not specific risk of injury, the incentive for manufacturers to invest in the development and testing of such safety-enhancing alternatives would be diminished.

Fortunately, the National Highway Traffic Safety Administration (NHTSA), the federal agency responsible for regulating automotive design, has announced that it is considering a regulatory strategy that could minimize the extent to which state-law tort claims interfere with the development of autonomous vehicles.

In October, NHTSA published an Advance Notice of Proposed Rulemaking (ANPR) in which it declared that it is considering the establishment of a research program that would gather data to inform the agency's development of safety standards appropriate for light-duty autonomous vehicles. See Pilot Program for Collaborative Research on Motor Vehicles With High or Full Driving Automation, 83 Fed. Reg. 50872 (Oct. 10, 2018). NHTSA explained that it wants to obtain data, “including data generated in real-world scenarios,’’ regarding the “new and developing technologies in their various iterations and configurations” so that the agency, manufacturers, and others can “gain practical, real world experience to determine the best approaches to enhancing safety.”

As explained in Part 2 of this article, the ANPR lays the groundwork for the preemption of state-law tort claims that could interfere with the development of autonomous vehicles. The ANPR makes clear that allowing manufacturers to test different automated systems on the nation’s roadways would assist NHTSA in “developing the data necessary to support such future [safety] standards as may be needed.” In squarely assigning a federal regulatory purpose to the design discretion that automotive manufacturers would enjoy during the contemplated study period, NHTSA has set the stage for the implied preemption of state-law tort claims under Geier v. American Honda Motor Co., 529 U.S. 861 (2000), the seminal Supreme Court decision in the area.
To understand why the ANPR will likely preclude state-law tort claims challenging the design of light-duty autonomous vehicles, some background is necessary.


Federal law preempts—i.e., supersedes—state law under three circumstances: “First, when acting within constitutional limits, Congress is empowered to pre-empt state law by so stating in express terms.” Hillsborough Cnty. v. Automated Med. Labs., Inc., 471 U.S. 707, 713 (1985). Second, “[w]hen Congress intends federal law to ‘occupy the field,’ state law in that area is preempted.” Crosby, 530 U.S. at 372. Finally, and of particular relevance in the automotive industry, “state law is naturally preempted to the extent of any conflict with a federal statute,” either because “it is impossible for a private party to comply with both state and federal law” or because “under the circumstances of [a] particular case, [the challenged state law] stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress.” Id. (internal quotation marks omitted).

Congress has legislated in the area of automotive safety. In 1966, Congress enacted the National Traffic and Motor Vehicle Safety Act. The Act, as amended, is now codified at 49 U.S.C. § 30101 et seq. It directs the Department of Transportation, acting through what is now known as NHTSA, “to prescribe motor vehicle safety standards” so as “to reduce traffic accidents and deaths and injuries resulting from traffic accidents.” Id. § 30101. If NHTSA has adopted a federal motor vehicle safety standard (FMVSS) with respect to a certain aspect of vehicular performance, the statute expressly preempts any divergent state-law standard, declaring that “a State or a political subdivision of a State may prescribe or continue in effect a standard applicable to the same aspect of performance ... only if the standard is identical to the standard prescribed” by NHTSA. 49 U.S.C. § 30103(b)(1).

In practice, because NHTSA has adopted a comprehensive set of safety standards, states and local governments may not enforce statutes or regulations imposing their own performance requirements on cars.

Significantly, however, the statute also contains a savings clause which provides that “[c]ompliance with a motor vehicle safety standard prescribed” by the NHTSA “does not exempt a person from liability at common law.” 49 U.S.C. § 30103(e). Thus, although the Act prohibits states and localities from enforcing statutes or regulations that impose performance requirements different from those imposed by NHTSA, the Act permits private plaintiffs to impose such requirements through the use of state tort law.

The possibility that private plaintiffs might use state tort law to retrospectively impose performance requirements beyond those mandated by NHTSA would impede the development and deployment of autonomous vehicles. The imposition of post-hoc design standards through state-law tort litigation would create a regulatory environment lacking the uniformity and predictability that are essential to fostering the massive investment in research and development needed to bring autonomous vehicles to fruition.

Any state-level safety standards—whether prescribed by statute, regulation, or common law—carry the risk that manufacturers would face a 50-state patchwork of divergent requirements. Having to satisfy varying design and performance requirements would increase development costs, both in the aggregate, because manufacturers would have to design and test multiple variants of a given vehicle, and on a per-unit basis, because the cost of engineering each state-specific design element would have to be amortized over relatively few vehicles. There is, moreover, the risk that safety standards imposed by one state would be not only different from, but incompatible with safety standards imposed by another state. Such dissonance would further amplify the cost of state-level safety requirements.

The imposition of performance standards through state tort law is particularly problematic, because common-law litigation—which relies on retrospective, ad hoc adjudication by lay juries—introduces a high degree of uncertainty. The fact that general tort duties, such as the duty to exercise reasonable care, are particularized only after the fact, when a jury decides whether the defendant’s specific conduct violated the abstractly stated standard of care, means that manufacturers cannot know in advance whether the vehicles that they have designed will satisfy state law. This uncertainty is compounded by the fact that one jury might find use of a particular design feature tortious while another might not. And because distinct
juries consider individual cases seriatim, different juries might return verdicts that are not merely inconsistent but flatly contradictory, even when the tort law of the same state is being applied. One jury, for example, might conclude that, given the risk of human error when a person must unexpectedly take control of a moving vehicle, the standard of reasonable care requires designing autonomous cars to automatically return to a predetermined safe mode when they leave their operational design domain, while another jury might conclude that, given the risk of stopping outside designated parking spots, the standard of reasonable care requires the installation of a manual back-up system that would allow a person to take control of the car when it leaves its operational design domain. Were manufacturers subject to such contradictory verdicts, they would not know what is required of them going forward and might be held liable whichever engineering solution they choose. They could, in effect, become their customers’ insurers.

Imposing performance standards through tort law is especially troublesome because lay juries lack the perspective of expert regulators. Engineering always involves trade-offs. Adopting a certain design might well minimize the overall risk of injury but could nonetheless increase the chance of a particular type of injury. Considering a suit brought by a sympathetic individual injured in that particular way, a jury might hold an automotive manufacturer liable even though the manufacturer adopted a design that minimized the aggregate risk of injury. As the Supreme Court observed in the medical-device context, regulators can “be expected to apply cost-benefit analysis” to design issues whereas “[a] jury” hearing a case brought by an injured plaintiff “sees only the cost” of a particular design because the individuals “who reaped th[e] benefits” of that design “are not represented in court.” Riegel v. Medtronic, Inc., 552 U.S. 312, 325 (2008). A danger of regulation through tort law, therefore, is the risk that jury verdicts will create perverse incentives that obstruct rather than promote vehicular safety.

For these reasons, it is important that automotive manufacturers be shielded from state-law design-defect claims, at least during the transition to autonomous vehicles, when it is critical that alternative approaches to vehicular design be thoroughly vetted under real-world conditions. As noted above and explained in Part 2 of this article, the recent ANPR announcing NHTSA’s interest in gathering data through a pilot research program signals a regulatory strategy that, if adopted, would reduce the likelihood of state tort law interfering with the development of autonomous vehicles despite the fact that “[c]ompliance with a motor vehicle safety standard prescribed” by the NHTSA “does not exempt a person from liability at common law.” 49 U.S.C. § 30103(e).