



**“Autonomous Vehicles and Auto Insurance in California:
How Will Consumers Be Protected?”
Testimony of Harvey Rosenfield
Consumer Watchdog¹
before the
Senate Insurance Committee
Sacramento, California
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Chair Mendoza and Members of the Committee:

For nearly thirty years, California drivers have had the benefit of the best consumer protection system in the nation. The insurance reforms passed by the voters in November 1988, known as Proposition 103, have protected motorists (along with homeowners, renters, businesses and medical providers) against excessive rates and discriminatory practices by insurance companies. Thanks to Prop 103, California is the only state in the nation where the average auto insurance premium went down between 1989 and 2010, according to a report by the Consumer Federation of America, saving motorists alone over \$100 *billion* in premiums since 1989;² CFA’s report concluded that “California stands out from all other states in having the best regulatory system for protecting consumers.”

¹ Consumer Watchdog is a non-profit, non-partisan organization. Harvey Rosenfield, the founder and presently outside counsel, is the author of Proposition 103.

² What Works? A Review of Auto Insurance Rate Regulation in America, Consumer Federation of America, November 12, 2013.

Proposition 103 is an integral component of California's Personal Responsibility System, a set of tort and insurance laws that dispenses justice: First, by encouraging the safe manufacture, marketing and operation of cars and trucks. Second, by requiring auto insurance premiums and rate setting practices to emphasize safety, not surrogates for wealth, race or creed. Third, by determining fault and compensation for, deaths, injuries and property damage caused by defective cars or the negligent operation of vehicles. Fourth, by making sure that insurance companies handle claims fairly. Fifth, by exposing safety dangers and forcing manufacturers to correct them so others aren't hurt. This system, grounded in traditional American principles of accountability and transparency, has made California's marketplace one of the most stable, fair and prosperous in the nation.

The sparkly chimera of computers replacing human drivers –freeing people to spend their drive time more enjoyably and productively – has captivated the public and media, but, driven in large part by self-interested auto manufacturers and software developers, there has been little serious examination of the critical public policy questions posed by the committee today, which is why this hearing is welcome and Consumer Watchdog is pleased to participate.

When it comes to robot cars, the tech industry wants to floor it the whole way, blowing past the rules of the road. Insurance companies are racing to keep up. But a few caution cones are in order.

The bottom line is this: Proposition 103, with its powerful emphasis on protecting consumers against excessive rates, rewarding safe drivers with lower insurance premiums, and forcing insurance companies to open their books and operate under maximum public scrutiny, will stop insurance companies and robot car and truck manufacturers from shifting the blame, and the cost, onto consumers when their hardware and software fail.

To understand the crucial role that California's Personal Responsibility System will play in the coming decades, we must address two demonstrably erroneous assumptions.

First, a fully autonomous transportation system is not “just around the corner.” No fully self-driving vehicle is available for sale today, and notwithstanding a great deal of marketing hype, no manufacturer has announced a date when it will market a passenger car able to operate in all conditions without human intervention, and, importantly, what it will cost to buy.³ Moreover, the system of vehicle-to-vehicle, vehicle -to-satellite, vehicle-to-road sensor communications infrastructure that

³ A number of automakers have proclaimed they will sell autonomous vehicles over the next few years, but they are short on the specifics. For example, Ford has announced it intends to have a “fully autonomous” vehicle for commercial ride-sharing or ride-hailing applications by 2021, but according to the fine print the vehicle will offer only “high” not “full” automation. (<https://media.ford.com/content/fordmedia/fna/us/en/news/2016/08/16/ford-targets-fully-autonomous-vehicle-for-ride-sharing-in-2021.html>.)

would enable *tens of millions of vehicles* to simultaneously and securely operate in proximity to each other on streets and highways is barely in the planning stages. Nor is there any consensus on how local, state and the federal government will pay for it. After all, most municipalities these days are struggling to fill potholes.

So even if we assume that someday fully autonomous vehicles will be safe enough to deploy *and* that every American will be ready to surrender the steering wheel (a highly debatable assumption⁴), for the foreseeable future traditional vehicles driven by humans will share a “hybrid highway” filled with cars and trucks of widely varying degrees of autonomy and automation. Relatively few of them will be truly self-driving.

Second, the argument that robot cars and trucks will eliminate crashes is based on a fallacy: that machines don't make mistakes. While it makes sense that carefully tested automation technologies will improve the safety of cars and trucks in the future, completely self-driving cars don't exist yet and we have no idea how they will change transportation patterns once they arrive. So for the moment, the claim that robot vehicles will dramatically reduce vehicular deaths, injuries and property damage is speculation based on a laudable aspiration to an idyllic future – like Star Trek.

But we know this: machines do make mistakes – sometimes catastrophic mistakes. Consider the automation-related mass disasters that have befallen the commercial airline industry in recent years, notwithstanding its self-avowed goal of zero tolerance for failure.⁵

In any case, we don't need to answer the question whether or not robot cars will be 100% safe sometime in the distant future. Because we can say with certainty that in the short term, autonomous vehicles will pose new and unprecedented risks as they interact on the hybrid highway. These risks include failures in extremely complex hardware (Google and other companies' robot vehicles have been involved in multiple accidents and hundreds of near-misses, some even under carefully controlled conditions⁶); privacy breaches (endemic in the high tech industry⁷); hacking for criminal enterprises like smuggling, or even terrorist cyber-attacks

⁴ It is likely that self-driving vehicles, when they appear, will at least initially be adopted by commercial enterprises such as ride-sharing operations, not consumers.

⁵ M. Wald, “Pilots in Crash Were Confused About Control Systems, Experts Say,” New York Times, December 11, 2013; W. Langewiesche, “The Human Factor,” Vanity Fair October, 2014.

⁶ “California Robot Car Disengagement Reports Show Technology Not Ready for Safe Deployment Without Human Driver Behind Steering Wheel to Take Control, Consumer Watchdog Says,” Consumer Watchdog Press Release, February 1, 2017 (<http://www.consumerwatchdog.org/newsrelease/california-robot-car-disengagement-reports-show-technology-not-ready-safe-deployment-wit>).

⁷ K. Sheridan, “Data Breaches Exposed 4.2 Billion Records In 2016,” Information Week, January 25, 2017.

involving hundreds or thousands of vehicles, as the FBI has warned.⁸ Regulatory failure is another risk: last year's decision by the federal agency in charge of vehicle safety nationwide, the National Highway Transportation Safety Administration, to forego formal regulation of new safety technologies in favor of letting the industry regulate itself is particularly inimical to public safety in this period of rapid change.⁹

Perhaps the most dangerous risk posed by robot cars and trucks is their unregulated substitution of computers and software for the moral and practical judgment of human beings. A crucial and controversial component of the self-driving car is the set of algorithms that will determine how the vehicle responds when confronted with an unexpected, life-threatening emergency such as children playing in the street, pedestrians, roadside construction, and weather conditions. When Google's self-driving vehicle sideswiped a bus in Mountain View, California, the company called it a "misunderstanding" between the bus driver and the robot, chalking it up as a "learning experience."¹⁰ A software "misunderstanding," even at 2 m.p.h., cannot be dismissed. Just as occurs every day on our roadways, the robot vehicle will confront situations in which the choice is not *whether* to smash into someone, but rather *who* to hit when a collision is unavoidable: an oncoming vehicle, a pedestrian in a crosswalk, a mom pushing her infant in a stroller on the sidewalk? When a Mercedes executive suggested that their vehicles would protect the owner of the car, it created a public firestorm.¹¹

The corporations that program these algorithms will be responsible for making life and death decisions that will place their financial interests in conflict with their customers' lives. Yet they steadfastly refuse to disclose the directions they are programming into their computers.

Once the twin myths of robot car imminence and infallibility are examined, objective analysis confirms that California's Personal Responsibility System will be of decisive importance to California consumers over the coming decades.

When the inevitable crashes involving robot cars occur on the hybrid highway, the inquiry into what caused the crash and who is responsible for it will include the manufacturer of the automated vehicle's hardware and software. If, or more precisely, when something goes wrong, there's no reason to believe that

⁸ Motor Vehicles Increasingly Vulnerable to Remote Exploits," Federal Bureau of Investigation, March 17, 2016 (<http://www.ic3.gov/media/2016/160317.aspx#fn1>)

⁹ See Consumer Watchdog's letter to NHTSA criticizing this action: <http://www.consumerwatchdog.org/newsrelease/consumer-advocates-demand-federal-agency-act-auto-safety-petition>).

¹⁰ M. McFarland, "For The First Time, Google's Self-Driving Car Takes Some Blame For A Crash," Washington Post, February 29, 2016 (https://www.washingtonpost.com/news/innovations/wp/2016/02/29/for-the-first-time-googles-self-driving-car-takes-some-blame-for-a-crash/?utm_term=.f19f6bdc6f4d).

¹¹ D. Muoio, "An MIT Professor Explains Why We Are Still A Long Ways Off From Solving One Of The Biggest Problems With Self-Driving Cars," Business Insider March 5 2017 (<http://www.businessinsider.com/automakers-self-driving-car-trolley-problem-2017-3>).

manufacturers will not contest liability and attempt to shift the blame to the human driver, just as they consistently do today. Indeed, in the limited experience so far, the companies that have deployed robot technologies have not readily accepted responsibility for the crashes and near-misses. This is particularly true of Tesla, which has denied responsibility for two fatalities and at least one non-fatal crash involving its “Auto Pilot” software.¹² While some car companies have said that they will assume liability for the failure of their robot technologies, they haven’t put that in writing, and their pledge appears to be conditioned on a determination that their technology was *at fault*.¹³ That leads us precisely back to the tort law (and the need for insurance).

With the heightened risks that the new automated technologies will pose over the coming years, particularly the inherent complexity of the technology and the wall of secrecy behind which the high tech industry seeks to hide, strict liability, a mainstay of California’s consumer protection regime, will be essential. When their autonomous technologies fail, hardware and software manufacturers must be held strictly liable.

Disputes over liability and fault will require the full power of the civil justice system, with its procedural safeguards of an impartial judge, full public transparency, and trial by citizen juries, to investigate and publicly expose the cause of crashes (particularly their secret premeditated decision-making algorithms), compensate the victims for deaths, injuries and property damage, punish the wrongdoer, and force manufacturers to make changes in their products to prevent future harm.

For the same reasons, Proposition 103’s protections will remain essential. So long as motorists face legal responsibility for the harm they cause – as they clearly will for decades to come¹⁴ – they will require liability insurance.

Insurance companies that fret publicly about the specter of safer cars reducing their revenues will no doubt assess the heightened risk/threat matrix of new and untested technologies and the hybrid highway as a basis to argue for rate increases. There is, moreover, a real danger that insurance companies will pursue a new form of redlining to favor motorists who can afford more expensive cars with sophisticated computer systems and surcharge those who cannot. Proposition 103’s protections against unjust insurance rates – including product liability insurance

¹² B. Vlasic and N. Boudette, “As U.S. Investigates Fatal Tesla Crash, Company Defends Autopilot System,” *New York Times*, July 12, 2016; C. Shepherd, “Tesla Sued In China Over Fatal Crash,” *Financial Times*, September 20, 2016; “Tesla Autopilot Not To Blame For Bus Accident In Germany, Company Says,” *Guardian*, September 30, 2016.

¹³ M. Harris, “Why You Shouldn’t Worry About Liability for Self-Driving Car Accidents,” *IEE Spectrum*, October 12, 2015 (<http://spectrum.ieee.org/cars-that-think/transportation/self-driving/why-you-shouldnt-worry-about-liability-for-selfdriving-car-accidents>).

¹⁴ Crashes aside, consumers who own or lease self-driving vehicles will almost certainly be required to bear a maintenance obligation to ensure that the vehicle’s equipment – in particular its external sensors – are fully operational. Those sensors are the eyes and ears of the robot car’s brain, and an accidental, undetected parking lot ding in a single sensor could have serious consequences.

rates – unfair discrimination, and its emphasis on rewarding drivers with lower insurance premiums based on their safety record, their annual mileage, their driving experience, and other rating factors within their control that are “substantially related to the risk of loss,” will be more important than ever in the new automotive era.

Finally, the evolution of the car industry into a more frequent litigant may create conflicts in the duties that insurance companies owe their policyholders. If, as seems likely, car and truck manufacturers will purchase insurance coverage for robot vehicle defects, and possibly enlist insurance companies in handling consumer claims under those policies, the manufacturers and insurance companies will have a vested financial interest in protecting each other’s bottom line, in which case the threat to consumers when it comes to self-driving vehicle crashes is that every accident will be “your fault.” Proposition 103’s grant of regulatory authority to the elected Insurance Commissioner, and its public oversight and participation requirements, makes the Department of Insurance an ideal forum for the resolution of such issues.

Lurking behind some of the myths surrounding driverless vehicles is an insidious strategy.

- To suggest that robot cars are imminent is a fantasy that automakers, software firms and insurance companies might attempt to exploit in order to press lawmakers to re-write California’s consumer protection laws in their favor. Some advocates and allies of the insurance companies are proposing that Californians will no longer require the protections of the civil justice system and Proposition 103; we are starting to hear echoes of the discredited anti-consumer proposals such as no-fault, backed by big business, insurance companies and their network of lobbyists and academics, that have failed throughout the United States, and which California voters have rejected multiple times at the ballot box (Propositions 101, 104 and 106 in 1988; Proposition 200 in 1996). RAND, a longtime advocate of “no fault” auto insurance, has recently opined that “[t]he gradual shift in responsibility for automobile operation from the driver to the vehicle may lead to a similar shift in liability for crashes from the driver to the manufacturer”;¹⁵ “[t]his shift in responsibility from the driver to the manufacturer may make no-fault automobile-insurance regimes more attractive.”¹⁶

The insurance industry bitterly opposed Proposition 103 at the ballot box, and many companies continue to fight the rate reductions and premium rollbacks in the courts.¹⁷ Lawmakers should reject opportunistic maneuvers intended to roll back consumer rights.

¹⁵ Autonomous Vehicle Technology: A Guide for Policymakers, RAND Corporation, 2016, p. 118.

¹⁶ *Id.* at p.116.

¹⁷ A. Khouri, “State Farm Files Lawsuit to Block Historic Rollback In Insurance Rates,” Los Angeles Times, December 7, 2016.

Insurance companies would be better advised to focus their resources on the important consumer protection role they could choose to play as vehicle automation increases. Historically, the insurance industry has exhibited limited interest in safety and loss prevention, perhaps because insurers are cost-plus institutions: their profits are based on their projected costs, so when claims rise, insurers can justify charging higher premiums, and earn more investment income. These incentives have discouraged insurance companies from using their vast database on vehicle hazards to alert manufacturers of vehicle dangers and to press them – and lawmakers – for safety improvements. This moment in history, marking a rapid evolution in vehicle technology, is the right time for the insurance industry to weigh in with a commitment to strong federal safety regulation, for example, and more attention to vehicle and highway safety.

- To suggest that machines are infallible is to delegitimize human beings; that serves a perennial argument by industry in favor of arbitrarily restricting injured consumers from seeking compensation for uniquely human damages like emotional distress.
- The suggestion that California's consumer protections be pared back is a threat to the principle of *public transparency* – a core value of democracy, the judicial system and Proposition 103, and reflected in the California Department of Motor Vehicles' driverless vehicle regulations. It's particularly troubling because the supporters of robot cars and trucks have consistently refused to disclose adequate information about their products, including technical data and video recordings related to crashes and how their computer programs will handle life and death decisions.

The answer to the question posed by today's hearing – how will consumers be protected in the era of automated and self-driving vehicles? – is through the rigorous application of the consumer protections reflected by California's Personal Responsibility System.