Baby You Can Drive My Car: The Case for the SELF-DRIVE Act

By Jonathan T. Helton

***Resolved: The United States federal government should substantially reform the use of Artificial Intelligence technology.***

This case seeks to solve a problem that the transportation industry commonly encounters: patchwork regulations. For autonomous vehicles (AVs), patchwork state regulations are making progress complicated and safety standards scattershot. These patchwork regulations are holding back the AV industry and ceding U.S. innovation to China. A baseline federal standard is needed. Enter the SELF-DRIVE Act. It passed the House of Representatives back in 2017 but didn’t get anywhere in the Senate. Now it’s back and needs to be passed. It gives the federal government authority over AV safety standards, creates cybersecurity standards for AVs, and proposes exemptions for a certain number of AVs. The bill isn’t perfect, but it’s a first step in creating standards that will clearly outline the benefits and drawbacks of AVs, for both the industry and the public. Good luck!

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Baby You Can Drive My Car: The Case for the SELF-DRIVE Act

Self-driving cars are the next big thing that will transform society… if only we let them. Status Quo policies impede their development and we urge you to join us in finding the comparative advantages of affirming that: The United States Federal Government should substantially reform the use of Artificial Intelligence technology

OBSERVATION 1. DEFINITIONS

Artificial Intelligence

Jake Frankenfield 2021 (journalist with experience in business, finance, and technology) “Artificial Intelligence (AI)” 8 March 2021 INVESTOPEDIA <https://www.investopedia.com/terms/a/artificial-intelligence-ai.asp> (accessed 1 June 2021)

Artificial intelligence (AI) refers to the simulation of human intelligence in machines that are programmed to think like humans and mimic their actions. The term may also be applied to any machine that exhibits traits associated with a human mind such as learning and problem-solving.

Autonomous vehicle, or AV

Technopedia, reviewed by Navaneeth Kamballur Kottayil 2021 (Senior Machine Learning Developer in AltaML. masters (IIT Kharagpur, India) and doctorate degrees in Computing Science/Artificial Intelligence, University of Alberta, Canada) “What Does Autonomous Vehicle Mean?” last updated 30 April 2021 <https://www.techopedia.com/definition/30056/autonomous-vehicle> (accessed 2 June 2021)

An autonomous vehicle is a vehicle that can drive itself without input from a human driver. There are several types of self-driving vehicles, depending on their level of automation. These levels have been defined by the Society of Automotive Engineers (SAE) which has set 6 of them adopted by the U.S. Department of Transportation ranging from Level 0 (fully manual) to Level 5 (fully autonomous).

OBSERVATION 2. INHERENCY, or key facts about the Status Quo

FACT 1. Unprepared. Inaction by Congress holds back autonomous vehicle availability

Ashley Johnson 2020 (policy analyst at the Information Technology and Innovation Foundation; master’s degree in security policy from George Washington Univ) “Time for Congressional Action to Speed the Arrival of Self-Driving Cars” 6 January 2020 <https://itif.org/publications/2020/01/06/time-congressional-action-speed-arrival-self-driving-cars> (accessed 2 June 2021)

Autonomous vehicles are the future of transportation, but so far, the United States is unprepared for them. Congress needs to act swiftly to establish consistent industry regulations that allow companies to safely test and deploy these vehicles, or it risks delaying their arrival.

FACT 2. The SELF DRIVE Act. Also known as HR 8350, it’s a bill that’s been proposed in Congress, but never enacted, that sets federal standards for self-driving cars

Ariel Darvish 2018 (Student at Fordham Law School; BA in Accounting from Queens College) “The SELF DRIVE Act: Cybersecurity and Cars on Autopilot” 15 January 2018 <https://news.law.fordham.edu/jcfl/2018/01/15/the-self-drive-act-cybersecurity-and-cars-on-autopilot/> (accessed 1 June 2021)

The SELF DRIVE Act includes three major components. First, it prevents states from banning self-driving vehicles, and gives the National Highway Traffic Safety Administration (“NHTSA”) the authority to regulate self-driving vehicles as it does with “normal cars.” Second, it grants “exemptions to existing safety standards for a company’s first 100,000 vehicles,” to promote and speed up the process of developing self-driving cars and getting them to market. Finally, the SELF DRIVE Act mandates protections for consumer privacy and the prevention of cyberattacks on self-driving vehicles.

FACT 3. Barriers overcome. The SAFE DRIVE Act would overcome the barriers and get autonomous vehicles on the road

Maggie Miller 2020 (journalist) 23 Sept 2020 “House Republican introduces legislation to set standards for self-driving cars” THE HILL <https://thehill.com/policy/technology/517794-house-republican-introduces-legislation-to-set-standards-for-self-driving> (accessed 10 June 2021)

Rep. [Bob Latta](https://thehill.com/person/bob-latta) (R-Ohio) on Wednesday introduced legislation to set standards for the safety and security of autonomous vehicles. The Safely Ensuring Lives Future Deployment and Research in Vehicle Evolution Act, or [Self Drive Act](https://republicans-energycommerce.house.gov/wp-content/uploads/2020/09/2020.09.23-SELF-DRIVE.pdf), would provide standards for the testing and deployment of self-driving cars — including those on cybersecurity — along with improving the National Highway Traffic Safety Administration’s (NHTSA) ability to adapt federal driving regulations to autonomous vehicles. Latta, who serves as the ranking member of the House Energy and Commerce Subcommittee on Communications and Technology, along with Energy and Commerce Committee ranking member [Greg Walden](https://thehill.com/people/greg-walden) (R-Ore.) on Wednesday pointed to the legislation as necessary for the U.S. to win the “global race” on autonomous vehicles (AVs). “There is a clear global race to AVs and for the U.S. to win that race, Congress must act to create a national framework that provides developers certainty and a clear path to deployment,” Latta and Walden said in a joint statement. “From increasing mobility for seniors and self-sufficiency for those with disabilities to providing contactless deliveries during the COVID-19 pandemic, AVs have limitless potential to drastically improve the lives of Americans.” “We cannot allow the U.S. to be outpaced and this effort strikes a critical balance of ensuring safe development and deployment of AVs while keeping the U.S. at the forefront,” they added.

OBSERVATION 3. The Plan, implemented by Congress, the President, the US Dept. of Transportation and any other necessary federal agencies

1. Congress passes HR 8350, the SELF-DRIVE Act.

2. Any laws in conflict are amended or superseded.

3. Enforcement through the Department of Transportation, federal courts, and any other necessary agencies.

4. Funding through existing budgets of existing agencies and general federal revenues.

5. Plan takes effect 3 days after an Affirmative ballot

6. All Affirmative speeches may clarify.

OBSERVATION 4. ADVANTAGES

ADVANTAGE 1. Massive economic benefits

Full adoption of autonomous vehicles would bring $1 trillion in economic benefits to the US economy

Ashley Johnson 2020 (policy analyst at the Information Technology and Innovation Foundation; master’s degree in security policy from George Washington University) “Time for Congressional Action to Speed the Arrival of Self-Driving Cars” 6 January 2020 <https://itif.org/publications/2020/01/06/time-congressional-action-speed-arrival-self-driving-cars> (accessed 2 June 2021)

Autonomous vehicles are also poised to deliver significant savings. In 2014 [ITIF estimated](http://assets1c.milkeninstitute.org/assets/Publication/MIReview/PDF/78-87-MR64.pdf) that close to full adoption of AVs would generate over 1 trillion in annual savings to the U.S. economy. The majority of these savings will come from accident reduction and reduced traffic congestion. These numbers don’t even take into account the lifestyle improvements of a driverless future, which include increased mobility for people who are older or disabled and extra leisure time during what were previously tedious, time-sucking commutes.

ADVANTAGE 2. Big improvements in motor vehicle safety

A. Smarter driving. Self driving cars don’t do stupid things humans do that cause accidents, and would save over 20,000 lives per year

Katie McAuliffe 2017 (executive director of Digital Liberty and Federal Affairs Manager at Americans for Tax Reform.) “The 'Self Drive' Act puts America on the road to reducing congestion” 6 September 2017 <https://thehill.com/blogs/pundits-blog/technology/349375-the-self-drive-act-puts-america-on-the-road-to-reducing> [brackets added] (accessed 3 June 2021)

SDC [self-driving cars] cannot text at the wheel or drink and drive. While on average there are currently 6 million accidents a year in the United States, [under an era of SDC](http://www.businessinsider.com/advantages-of-driverless-cars-2016-6/#roads-will-be-safer-1)we could see a drop in accidents to 1.3 million accidents a year and a significant drop in accident related deaths from 33,000 a year to 11,300 a year. Case-by-case scenarios have shown even [partial autopilot features](http://fortune.com/2016/08/06/tesla-autopilot-hospital-rescue/)can prevent individuals from dying on the road.

B. Faster rollout. Faster rollout of self-driving cars would increase safety even more by increasing the data used to calibrate the artificial intelligence

Rebecca Linke 2017 (Associate editorial director for the MIT Sloan School of Management) “3 ways self-driving cars could disrupt industry” 4 October 2017 <https://mitsloan.mit.edu/ideas-made-to-matter/3-ways-self-driving-cars-could-disrupt-industry> (accessed 10 June 2021) (brackets added)

To ensure that self-driving cars can reliably make good decisions, even in situations they’ve never before encountered, we need to get more self-driving cars on the road, [MIT Professor David] Keith said. “To get from making good decisions 90 percent of the time to 99 percent of the time is easy enough. To get to 99.9 percent of the time is harder. To get rid of that vanishingly smaller margin of error, you’re talking millions and millions of miles of driving experience,” Keith said.

ADVANTAGE 3. Numerous social benefits

Self-driving cars would provide valuable benefits to the poor, disabled, and unemployed

Rebecca Linke 2017 (Associate editorial director for the MIT Sloan School of Management) “3 ways self-driving cars could disrupt industry” 4 October 2017 <https://mitsloan.mit.edu/ideas-made-to-matter/3-ways-self-driving-cars-could-disrupt-industry> (accessed 10 June 2021) (brackets added)

[Sharing self-driving cars](https://www.youtube.com/watch?v=UcCD3lXYlTk) could save people who are no longer buying cars money, and since there would be fewer cars on the road, there would also be less congestion.
**Wheels for those who need them**  Being able to push a button and summon an autonomous car will also open doors for many people who cannot drive cars themselves: teenagers; people who are sick; those who have lost their license; and the elderly among them. Self-driving cars can provide these people with more mobility, enabling many who previously were unable to get to jobs to find work. They will also help shuttle people to doctor’s appointments, allowing them to [receive care, which could in turn reduce medical costs](http://www.thecarconnection.com/news/1108395_self-driving-cars-could-put-2-million-people-with-disabilities-to-work-save-1-3-trillion-each-year).

2A Evidence: SELF-DRIVE Act

DEFINITIONS & BACKGROUND

Information on the bill:

Keith Laing 2020 (Automotive Regulations Reporter for Bloomberg) “Self-Driving Car Bill Reintroduced in House Minus Biggest Backer” 23 Sept 2020 <https://www.bloomberg.com/news/articles/2020-09-23/self-driving-car-bill-reintroduced-in-house-minus-biggest-backer> (accessed 1 June 2021)

The measure would allow the Secretary of Transportation to grant exemptions to federal motor vehicle rules that require cars to have human operators. Initially, 25,000 cars per automaker could be operated if companies can prove they meet existing safety standards for traditional cars. After a 12-month period, the number of exemptions per manufacturer would increase to 50,000, and it would go up to 100,000 in the third and fourth years. States would be prohibited from passing laws to limit sales more than the federal statute.

Full text of the bill is here – print it out and bring with you to the debate (38 pages)

<https://www.congress.gov/bill/116th-congress/house-bill/8350/text>

INHERENCY

Current trends: AV market growing, but needs federal oversight.

Dr. Daniel Araya 2019 (technology consultant; Senior Partner with the World Legal Summit and Senior Fellow with the Centre for International Governance Innovation; PhD from Univ. of Illinois at Urbana-Champaign) “The Big Challenges In Regulating Self-Driving Cars” 29 January 2019 <https://www.forbes.com/sites/danielaraya/2019/01/29/the-challenges-with-regulating-self-driving-cars/?sh=603bb153b260> (accessed 1 June 2021)

Autonomous vehicles face significant hurdles but they are coming. The market is simply too large to ignore. Notwithstanding two fatal accidents involving semi-autonomous vehicles last March, testing of the technology continues. In 2016, GM spent $581 million to acquire Cruise Automation. Last February, Ford announced that it would be investing $1 billion in Argo AI. And of course Tesla already offers enhanced autopilot. Transitioning to a self-driving society will take time. Smart federal oversight will be essential to getting it right.

Self-driving car technology rollout is waiting for federal direction

Courtney Rozen 2020 (White House Reporter at Bloomberg Government) “Self-Driving Car Rules Lag for Years as Technology Speeds Ahead” 24 February 2020 <https://about.bgov.com/news/self-driving-car-rules-lag-for-years-as-technology-speeds-ahead/> (accessed 1 June 2021) (brackets added)

“In some levels, they’re viewing it as letting technology lead, but I think in many ways, technology is waiting for that direction from the federal agency,” said Robert Molloy, who leads highway safety at the NTSB [National Transportation Safety Board]. “This is one case with so many stakes, and so many designers, that I think that there’s a clear role for the federal government to not necessarily pick winners and losers, but to facilitate the implementation of this technology in a safe way by providing parameters by which to do it.”

Must have federal standards to ensure safe operation of driverless cars

Aaron Marsh 2018 (He's written about you-name-it, from transportation and law and the courts to events of all kinds and telecommunications, and landed in trucking when he joined Fleet Owner in July 2015. Long an editorial leader, he's a keeper of knowledge at Fleet Owner ready to dive in on the technical and the topical inside and all around trucking—and still turns a wrench or two.) “Poll: Public concerned about, wants controls on self-driving vehicles” 16 January 2018 <https://www.fleetowner.com/technology/autonomous-vehicles/article/21701767/poll-public-concerned-about-wants-controls-on-selfdriving-vehicles> (accessed 2 June 2021)

Automakers have been focusing more and more on driverless cars and trucks "as a panacea" for highway deaths and injuries, but the federal government needs to set requirements and standards for these vehicles to ensure safest operation. So argues Advocates for Highway and Auto Safety, which found the American public wants such standards in a poll it conducted on autonomous vehicles.

Companies don’t respond proactively to cyber threats

Alexandra Green 2020 (B.A., University of Washington; J.D., Santa Clara Univ School of Law) “THE SELF DRIVE ACT: AN OPPORTUNITY TO RE- LEGISLATE A MINIMUM CYBERSECURITY FEDERAL FRAMEWORK FOR AUTONOMOUS VEHICLES” 6 May 2020 <https://digitalcommons.law.scu.edu/cgi/viewcontent.cgi?article=2895&context=lawreview> (accessed 2 June 2021) (ellipses in original)

Historically, companies have responded to cybersecurity threats and harms through a reactive process. According to Cavoukian and Dixon, with the ever-increasing frequency and sophistication of cybersecurity attacks, companies should construct “a security-minded culture” by being proactive and preventative when doing business. Under this principle, a change is necessary in the “state of mind” of the enterprise. This change begins with leadership of the company and then continues throughout the enterprise. Rather than responding to imminent threats with just tactical actions, this will involve taking a strategic assessment. Enterprises “need to take the strategic, proactive viewpoint, rather than the reactive, tactical one, defining what . . . security posture should be for an enterprise, and build upon that foundation.”

Lack of oversight: Regulators are failing to oversee the development of AVs

Aarian Marshall 2019 (journalist) “Who's Regulating Self-Driving Cars? Often, No One” 27 Nov 2019 [https://www.wired.com/story/regulating-self-driving-cars-no-one /](https://www.wired.com/story/regulating-self-driving-cars-no-one%20/) (accessed 1 June 2021)

Exactly how many vehicles are testing, where they’re doing it, and how those cars are performing is mostly anyone’s guess. In many states, companies experimenting with autonomous vehicles don’t have to specify, and the federal government doesn’t keep track either. Yes, the tech is still very much under development, and industry reps and experts say it’s way too early to create some kind of robot self-driver’s license exam. But two meetings in Washington, DC, last week made clear that some believe regulators aren’t properly overseeing the testing of this technology.

Cyber security: Self-driving cars are being developed with low cyber security standards and high risks

Alexandra Green 2020 (B.A., University of Washington, 2015. J.D., Santa Clara University School of Law, 2020.) “THE SELF DRIVE ACT: AN OPPORTUNITY TO RE- LEGISLATE A MINIMUM CYBERSECURITY FEDERAL FRAMEWORK FOR AUTONOMOUS VEHICLES” 6 May 2020 <https://digitalcommons.law.scu.edu/cgi/viewcontent.cgi?article=2895&context=lawreview> (accessed 2 June 2021)

In the development and manufacture of self-driving cars, cybersecurity research tends to be overlooked. In addition to threats and vulnerabilities for traditional vehicles generally, harms unique to self-driving cars are emerging as technology advances to automated mobility. Besides hackers having the possibility of seizing control of vehicles and demanding ransom, there are also “security threats to the wide-ranging networks that will connect with automated vehicles, from financial networks that process tolls and parking payments to roadway sensors, cameras and traffic signals to the electricity grid and our personal home networks.”

Patchwork regulations

Dr. Daniel Araya 2019 (technology consultant; Senior Partner with the World Legal Summit and Senior Fellow with the Centre for International Governance Innovation; PhD from Univ of Illinois at Urbana-Champagne) “The Big Challenges In Regulating Self-Driving Cars” 29 January 2019 <https://www.forbes.com/sites/danielaraya/2019/01/29/the-challenges-with-regulating-self-driving-cars/?sh=603bb153b260> (accessed 1 June 2021)

Like many new and disruptive technologies, AV legislation remains fragmented across a patchwork of state directives and voluntary guidelines. In the end, it’s up to Congress to provide a federal framework, including funding for the National Highway Traffic Safety Administration (NHTSA). Absent federal standards, driverless cars will have some way to go before becoming mainstream. Nonetheless, forecasts suggest that there could be as many as 21 million driverless cars in the United States and 27 million in Europe over the coming decade.

State regulations vary wildly

Aarian Marshall 2019 (journalist) “Who's Regulating Self-Driving Cars? Often, No One” 27 November 2019 [https://www.wired.com/story/regulating-self-driving-cars-no-one /](https://www.wired.com/story/regulating-self-driving-cars-no-one%20/) (accessed 1 June 2021)

Today, state rules for self-driving vary wildly. Arizona, for instance, is a [hotbed for self-driving testing](https://www.wired.com/story/mobileye-self-driving-cars-arizona/) in part because its governor in 2015 wrote an executive order telling state agencies to support their testing. Companies testing cars there with a backup driver behind the steering wheel—as Uber did before it was kicked out following the 2018 crash—must only [notify](https://azdot.gov/motor-vehicles/professional-services/autonomous-vehicle-notification-and-certification/steps) the state that they’re there. [**END QUOTE**] A company like [Waymo](https://www.wired.com/tag/waymo/), which has [reportedly started carrying some paying passengers](https://techcrunch.com/2019/11/01/hailing-a-driverless-ride-in-a-waymo/) in driverless vehicles around the Phoenix suburbs, must fill out more forms to get permission to nix the backup driver. In a statement, a spokesperson for the state’s Department of Transportation called Arizona’s rules a “rigorous process,” but said the department was reviewing the process after the release of the NTSB’s report. [**SHE GOES ON LATER TO SAY QUOTE**:] Pennsylvania and California, by contrast, took years to develop their tougher self-driving rules. Potential Pennsylvania testers have to complete a more detailed application, which must be approved by the state, and requires companies testing AVs to tell the state where they’re testing and report crashes. California collects and publishes information about testing vehicles’ performance, much to companies’ chagrin.

Application: California and Nevada

Sam Brodey 2017 (MinnPost’s Washington correspondent.) “With self-driving cars nearly a reality, Congress wonders how to regulate them” 31 October 2017 <https://www.minnpost.com/politics-policy/2017/10/self-driving-cars-nearly-reality-congress-wonders-how-regulate-them/> (accessed 2 June 2021)

But as [more states have developed their own rules](https://www.law360.com/articles/819698/a-state-by-state-guide-to-driverless-car-regulations), it’s become more complicated for the companies developing the technology — and who want to see it on roads across the U.S. — to comply. For example, California laws require that one person is present inside an automated vehicle as it’s being tested on the road. If that vehicle crossed the border into Nevada, an additional supervisor would need to get inside the car, as that state requires that two people be present during testing.

Federal reporting is voluntary

Aarian Marshall 2019 (journalist) “Who's Regulating Self-Driving Cars? Often, No One” 27 November 2019 [https://www.wired.com/story/regulating-self-driving-cars-no-one /](https://www.wired.com/story/regulating-self-driving-cars-no-one%20/) [brackets added] (accessed 1 June 2021) (NHTSA=National Highway Traffic Safety Administration. NTSB=National Transportation Safety Board)

Companies can choose to submit detailed safety information to the federal government, as part of NHTSA’s guidance on automated vehicles, which broadly outlines its approach on autonomous vehicles. But only 16 of the companies working on self-driving vehicles have chosen to do so, and the quality of the information is “kind of all over the place,” said [NTSB investigator Ensar] Becic.

Voluntary standards are not enough

Aaron Short 2020 (Writer, reporter, co-author "The Method to the Madness" (July 2019 St. Martin's Press)) “Trump Administration Keeps Hands Off Self-Driving Cars” 8 January 2020 (ellipses in original) <https://usa.streetsblog.org/2020/01/08/trump-administration-keeps-hands-off-self-driving-cars/> (accessed 2 June 2021)

“Without strong leadership and regulations … AV manufacturers can and will continue to introduce extremely complex supercomputers-on-wheels onto public roads, in direct contact with vehicles, bicyclists, pedestrians and other road users, with meager government oversight,” said Advocates for Highway and Auto Safety President Cathy Chase. “Voluntary guidelines are completely unenforceable, will not result in adequate performance standards, and fall well-short of the safeguards that are necessary to protect the public.”

National Highway Traffic Safety Administration holds lax requirements

Courtney Rozen 2020 (White House Reporter at Bloomberg Government) “Self-Driving Car Rules Lag for Years as Technology Speeds Ahead” 24 February 2020 <https://about.bgov.com/news/self-driving-car-rules-lag-for-years-as-technology-speeds-ahead/> (accessed 1 June 2021)

The agency has asked the public a few times for feedback on self-driving car topics, such as how it should define “driver” when a car is at least partially driven by software. The agency also recommends that companies testing self-driving cars submit self-safety assessments that address safety design elements. However, fewer than 20 companies testing self-driving cars had submitted safety evaluations as of late February, out of at least 65 that are testing them in the U.S., according to California state records. The NTSB called on NHTSA to make those reports mandatory after a self-driving Uber car struck and killed a pedestrian in 2018. The evaluations are also noticeably lacking technical details. One company’s 33-page self-safety assessment, for example, devotes at least eight pages to explaining the company’s business. Another includes bright headlines and photos describing how a self-driving car works.

Innovation is outpacing legislation

Dr. Daniel Araya 2019 (technology consultant; Senior Partner with the World Legal Summit and Senior Fellow with the Centre for International Governance Innovation; PhD from Univ of Illinois at Urbana-Champagne) “The Big Challenges In Regulating Self-Driving Cars” 29 January 2019 <https://www.forbes.com/sites/danielaraya/2019/01/29/the-challenges-with-regulating-self-driving-cars/?sh=603bb153b260> (accessed 1 June 2021)

Erecting effective policies and regulations for managing the mainstream adoption of self-driving cars remains a complicated challenge. Technological progress may be exponential, but legislative progress remains incremental. At least 41 states and the District of Columbia (DC) have considered legislation related to autonomous vehicles. Last year, the House of Representatives passed autonomous vehicle legislation H.R. 3388 to create uniform standards for AV. However, Democratic senators signaled their concerns that the technology remains immature and underdeveloped.

SOLVENCY / ADVOCACY

 A/T “More study needed” – Advocating that we study it until the risk is zero will sacrifice lives that could have been saved by gradual safety improvement over time

Dr Lance Eliot 2019 (global expert on AI, Stanford Fellow at Stanford University, was a professor at USC, headed an AI Lab) 21 Mar 2019 “Rough Choice: Lost Lives Versus Saved Lives to Achieve AI Self-Driving Cars” <https://lance-eliot.medium.com/rough-choice-lost-lives-versus-saved-lives-to-achieve-ai-self-driving-cars-1d81d17ae95a>

They are willing to allow AI self-driving cars once they have presumably been “perfected” and are guaranteed (somehow?) to not cause or produce any car-related deaths. This position would be that you can keep trying to perfect AI self-driving cars in other ways, just not on the public roadways. [**END QUOTE**] Test those budding AI self-driving cars on special closed-tracks that are made for the purposes of advancing AI self-driving cars. Use extensive and large-scale computer-based simulations to try and iron out the kinks. Do whatever can be done, except for being on public roadways, and when that’s been done, and in-theory the AI self-driving car is finally ready for death-free driving on the public streets, it can be released into the wild. The auto makers and tech firms claim that without using AI self-driving cars on the public roadways, there will either not be viable AI self-driving cars until a far distant future, or it might not ever come to pass at all. For those that are in the camp of no-deaths, they reply that go ahead and take whatever time you need. If it takes 20 years, 50 years, a thousand years, and you still aren’t ready for the public roadways, so be it. That’s the price to pay for ensuring the no-deaths perspective. But this seems reminiscent once again of the LNT argument. [**HE CONTINUES LATER IN THE CONTEXT QUOTE:]** Suppose that while you wait for AI self-driving cars to be perfected, meanwhile those 37,000 deaths per year with conventional cars is continuing unabated. If you wait say 50 years for AI self-driving cars to be perfected, you are also presumably offering that you are willing to have perhaps nearly 200,000 people die during that period of time. This hopefully moves the discussion into one that attempts to see both sides of the equation. There are presumably deaths or lives to be saved, as a result of the adoption of AI self-driving cars, though it is conceivable that those AI self-driving cars will still nonetheless be attributable to some amount of car-related deaths. Are you willing or not to seek the “good” savings of lives (or reductions in deaths), in exchange for the lives (or deaths) that will be lost while AI self-driving cars are on our roadways and being perfected (if there is such a thing)? If you could get to AI self-driving cars sooner, such as in 10 years, during which in-theory without any AI self-driving cars on the roadways you would have lost say 370,000 lives, would you do so, if you also were willing to allow for some number of car-related deaths that were attributable to the still being perfected AI self-driving cars. That’s the rub.

Solvency: Provides consistent regulation

Katie McAuliffe 2017 (executive director of Digital Liberty and Federal Affairs Manager at Americans for Tax Reform.) “The 'Self Drive' Act puts America on the road to reducing congestion” 6 September 2017 <https://thehill.com/blogs/pundits-blog/technology/349375-the-self-drive-act-puts-america-on-the-road-to-reducing> [brackets added] (accessed 3 June 2021)

But, in order for SDC [self-driving cars] to be properly tested and deployed in the future, we need a consistent regulatory framework conducive to innovation. That is what the SELF DRIVE Act provides. It clarifies state and federal authority; guidelines for NHTSA to data for safety and development; and puts down initial markers for cyber security, privacy, and consumer education.

Solvency: Eliminates patchwork regulations

Christopher H. Grigorian and Nicholas Englund 2017 (Grigorian is a partner with Foley & Lardner LLP, where he chairs the firm’s NHTSA & Motor Vehicle Safety practice. Englund is special counsel and business lawyer with Foley & Lardner LLP, and a member of the firm’s NHTSA & Motor Vehicle Safety Practice) “Late to the Scene, the “Safely Ensuring Lives Future Deployment and Research In Vehicle Evolution Act” (“SELF DRIVE Act”) Seeks to Set Course for Future Development” 31 July 2017 <https://www.foley.com/en/insights/publications/2017/07/late-to-the-scene-the-safely-ensuring-lives-future> (accessed 2 June 2021)

The SELF DRIVE Act would clarify and expand the National Highway Traffic Safety Administration’s authority with respect to highly automated vehicles. Foremost in the draft bill is its express preemption of state laws governing the design, construction, or performance of highly automated vehicles. Under the bill, states may continue to regulate licensing, registration, liability, safety inspections and certain other aspects of vehicles and their operation, but they would be preempted from regulating the design, construction or performance of highly automated vehicles, automated driving systems, or components of automated driving systems unless the state law is identical to a standard prescribed under the Federal law. However, this does not preclude the United States Government, a State, or a political subdivision of a State from prescribing a higher performance requirement for its own use. The preemption language should begin pushing toward a regulatory regime that avoids a patchwork of differing requirements that could stifle the rollout of automated vehicles.

Information on the annual exemption quotas during the first 4 years

Christopher H. Grigorian and Nicholas Englund 2017 (Grigorian is a partner with Foley & Lardner LLP, where he chairs the firm’s NHTSA & Motor Vehicle Safety practice. Englund is special counsel and business lawyer with Foley & Lardner LLP, and a member of the firm’s NHTSA & Motor Vehicle Safety Practice) “Late to the Scene, the “Safely Ensuring Lives Future Deployment and Research In Vehicle Evolution Act” (“SELF DRIVE Act”) Seeks to Set Course for Future Development” 31 July 2017 <https://www.foley.com/en/insights/publications/2017/07/late-to-the-scene-the-safely-ensuring-lives-future> (accessed 2 June 2021)

The SELF DRIVE Act would create a fifth exemption category under 49 U.S.C. § 30113, authorizing NHTSA to exempt a manufacturer from meeting one or more Federal motor vehicle safety standards (FMVSSs) to facilitate the development and field testing of highly automated vehicles, features or systems. To qualify for an exemption, the petitioning manufacturer must demonstrate that the safety level of the system or feature at least equals the safety level of the standard for which exemption is sought or that the vehicle provides an overall safety level at least equal to the overall safety level of nonexempt vehicles. Under this provision, NHTSA would have authority to exempt up to 25,000 vehicles manufactured in the first 12-month period, 50,000 vehicles manufactured in the second 12-month period, 100,000 vehicles manufactured in the third 12-month period, and 100,000 vehicles manufactured in the fourth 12-month period. Manufacturers would be required to provide information about all crashes involving exempted vehicles of which the manufacturer becomes aware. The bill would also require NHTSA to create a searchable public database of exempted vehicles.

Allows NHTSA to regulate design and production

Christopher H. Grigorian and Nicholas Englund 2017 (Grigorian is a partner with Foley & Lardner LLP, where he chairs the firm’s NHTSA & Motor Vehicle Safety practice. Englund is special counsel and business lawyer with Foley & Lardner LLP, and a member of the firm’s NHTSA & Motor Vehicle Safety Practice) “Late to the Scene, the “Safely Ensuring Lives Future Deployment and Research In Vehicle Evolution Act” (“SELF DRIVE Act”) Seeks to Set Course for Future Development” 31 July 2017 <https://www.foley.com/en/insights/publications/2017/07/late-to-the-scene-the-safely-ensuring-lives-future> (accessed 2 June 2021)

Dovetailing the approach NHTSA has been pursuing in this area, the SELF DRIVE Act contemplates providing oversight for the safe development and production of automated vehicles. Specifically, it would require NHTSA to promulgate a final rule requiring manufacturers to submit safety assessment certifications, whereby manufacturers would submit test data and other information demonstrating that the vehicles are likely to function as intended and contain fail-safe features. Until NHTSA issues the final rule, the SELF DRIVE Act would require manufacturers to submit the safety assessment letters described in the Federal Automated Vehicles Policy (or any successor guidance). The bill would also require NHTSA to submit a rulemaking and safety priority plan to Congress, outlining the agency’s rulemaking priorities with respect to such areas as human machine interface, sensors, and actuators, as well as process and procedure standards for software and cybersecurity.

Flexible cyber standards

Ariel Darvish 2018 (Student at Fordham Law School; BA in Accounting from Queens College) “The SELF DRIVE Act: Cybersecurity and Cars on Autopilot” 15 January 2018 <https://news.law.fordham.edu/jcfl/2018/01/15/the-self-drive-act-cybersecurity-and-cars-on-autopilot/> (accessed 1 June 2021) (brackets in original)

Today’s evolving technology makes our day to day lives much easier, but comes with an increasing vulnerability to cyberattacks. With automakers working toward development of self-driving vehicles, many are worried about hackers accessing and taking control of these cars. To promote the development of self-driving vehicles, the SELF DRIVE Act gives broad guidelines for cybersecurity programs, allowing for advanced cybersecurity measures to be implemented as they are established.Given the broad language of the Act, automakers have the freedom to “create and test more [cybersecurity solutions]” and come to the “dynamic solutions” that will ensure our safety while autopilot enabled cars drive us.

A/T “SELF DRIVE cybersecurity is vague” – No, it’s flexible, which is what’s necessary

Ariel Darvish 2018 (Student at Fordham Law School; BA in Accounting from Queens College) “The SELF DRIVE Act: Cybersecurity and Cars on Autopilot” 15 January 2018 <https://news.law.fordham.edu/jcfl/2018/01/15/the-self-drive-act-cybersecurity-and-cars-on-autopilot/> (accessed 1 June 2021)

Cyberattacks on self-driving vehicles may lead to the hacking of the vehicle, potentially leading to dangerous situations in which the hacker controls the entirety of the car’s movements. To prevent this, the SELF DRIVE Act requires that automakers set up “a process for identifying and mitigating ‘reasonably foreseeable’ vulnerabilities,” and “have cybersecurity managers, training, and intrusion prevention and response systems in place.” Some claim that the cybersecurity requirements are overly vague and open to interpretation, leaving automakers to decide on their own what vulnerabilities are “reasonably foreseeable.” However, given the rapid pace of technological advancement, the broad regulatory language is apt, as it leaves room for new technical approaches and cybersecurity countermeasures to be implemented without requiring a change to the law.

Flexibility provides for robust data regulations

Future of Privacy Forum 2017 (and the FPF Education and Innovation Foundation are non-profit organizations that serve as catalysts for privacy leadership and scholarship, advancing principled data practices in support of emerging technologies. “THE HOUSE’S SELF DRIVE ACT RACES AHEAD ON PRIVACY” Published 28 July 2017, updated 14 December 2020 <https://fpf.org/blog/houses-self-drive-act-races-ahead-privacy/> (accessed 2 June 2021)(NHTSA=National Highway Traffic Safety Administration, regulatory agency, part of US Dept of Transportation)

The bill also calls for creation of a Highly Automated Vehicle Advisory Council that will monitor and provide advice to NHTSA on several issues protection of consumer privacy and security. This Council will have the flexibility to monitor this space and recommend best practices going forward. The House bill provides flexibility for manufacturers to determine best practices in a nascent industry, where data is only beginning to play a part. The exact data that will need to be generated, stored, and shared to facilitate self-driving cars is not yet known, even by industry experts, and a bill that requires a plan but provides flexibility on exact treatment of such data is a promising step.

A/T “National Highway Traffic Safety Administration (NHTSA) bad” – they look to private expertise

Marc Scribner 2018 (senior fellow at the Competitive Enterprise Institute) “Debunking the Dilatory Objections to the AV START Act” 22 May 2018 <https://cei.org/blog/debunking-the-dilatory-objections-to-the-av-start-act/> (accessed 3 June 2021)

Finally, the AV Delay Five ignore how auto safety standards are developed. It was implicit federal policy for 30 years and has been explicit federal policy for 20 years that NHTSA (and regulatory agencies generally) should, whenever possible, incorporate private standards developed by expert engineers in lieu of crafting government-unique rules. The rationale is simple: the technical expertise outside government is far greater than the technical expertise inside government. So, when NHTSA is looking to promulgate a new rule or revise an existing rule, it first looks at nongovernmental standards-setting bodies, the top three being SAE International, American Society for Testing and Materials, and the American National Standards Institute.

Advocacy: SELF-DRIVE Act provides “sensible measures”

Jim DeLorenzo 2017 (Solutions Marketing Manager at Thales eSecurity.) “Why autonomous vehicles might accelerate the theft of personal information” 19 October 2017 <https://statescoop.com/why-autonomous-vehicles-might-accelerate-the-theft-of-personal-information/> (accessed 2 June 2021)

We often see consumer manufacturers get caught up in rabid market demand before fully integrating comprehensive security measures into their hot products. In the case of autonomous cars, lives will literally be at stake, so we should ensure that security concerns are adequately addressed before it’s too late. The SELF DRIVE Act outlines sensible measures all manufacturers should take before we let any autonomous cars loose on our streets.

Advocacy: the House of Representatives voted for it unanimously in 2017. Inherency: The Senate is blocking it now

Maggie Miller 2020 (journalist) 23 Sept 2020 “House Republican introduces legislation to set standards for self-driving cars” THE HILL <https://thehill.com/policy/technology/517794-house-republican-introduces-legislation-to-set-standards-for-self-driving> (accessed 10 June 2021)

The bill was previously passed by the House unanimously in 2017 but stalled out in the Senate during the last Congress, along with a similar Senate bill, due to opposition by a group of Democrats over safety and security language in the bills.  According to Axios, which [first reported](https://www.axios.com/new-push-for-autonomous-vehicles-bill-4f77892d-bcbe-4e74-a725-1b8ce9b9b46b.html?utm_campaign=organic&utm_medium=socialshare&utm_source=twitter) the bill’s introduction, the new version of the Self Drive Act contains changes to language that make self-driving car standards more inclusive for those with disabilities.  The version of the Self Drive Act passed by the House in 2017 was co-sponsored by almost a dozen Democrats, but no Democrats signed on to the new bill.

Advocacy: Passed the House unanimously in 2017

Energy and Commerce Committee Republicans 2020 (The Committee on Energy and Commerce is the oldest standing legislative committee in the U.S. House of Representatives) “ICYMI: Rep. Latta reintroduces SELF DRIVE Act” 23 September 2020 <https://republicans-energycommerce.house.gov/news/in-the-news/icymi-rep-latta-reintroduces-self-drive-act/> (accessed 1 June 2021)

Last year, the SELF DRIVE Act was not only supported by every Democrat on the Energy and Commerce Committee, but also passed in the House of Representatives unanimously. Unfortunately, two years later, House Democrats have seemed to put their focus on supporting the trial bar’s monetary interests over roadway safety and U.S. leadership against China and other bad actors.

Advocacy: Michigan Department of Transportation

Skip Descant 2017 (journalist) “State and Local Officials Respond to Federal Self-Driving Car Legislation” 7 September 2017 <https://www.govtech.com/fs/news/local-and-state-officials-respond-to-federal-self-driving-car-legislation.html> (accessed 1 June 2021) (context is referring to the House passage of the SELF DRIVE Act, before the Senate failed to pass it)

“Based on what we have seen in the bills, we are very supportive,” said Kirk Steudle, director of the Michigan Department of Transportation. “That is mostly because it maintains the distinctive role of the federal and state and local governments.”

ADVANTAGES

Accident Reduction

Slowing AV developments = lives lost

Aarian Marshall 2019 (journalist) “Who's Regulating Self-Driving Cars? Often, No One” 27 November 2019 [https://www.wired.com/story/regulating-self-driving-cars-no-one /](https://www.wired.com/story/regulating-self-driving-cars-no-one%20/) (accessed 1 June 2021)

Last December, the Senate’s first bit of legislation that would have governed self-driving cars, a bill called AV START, sputtered and died after an analogous bill passed the House. The stakes are still high: More than 36,000 people died on American roads last year, according to federal statistics, including a growing number of pedestrians and cyclists. Slowing the development of self-driving vehicles, which should one day drive with more precision and way less distraction, might mean more lives lost in the long run. But some have begun to question whether autonomous vehicles, when they arrive, will be unmitigated saviors. And more deaths in the testing phase could decelerate their rollout too.

Tesla study finds: Self-driving cars reduce crashes 40%

Rebecca Linke 2017 (Associate editorial director for the MIT Sloan School of Management) “3 ways self-driving cars could disrupt industry” 4 October 2017 <https://mitsloan.mit.edu/ideas-made-to-matter/3-ways-self-driving-cars-could-disrupt-industry> (accessed 2 June 2021)

Safety first In 2016, more than 40,000 people died in motor vehicle accidents. Self-driving cars, though, could reduce that number — data shows that Teslas with Autopilot activated were 40 percent less likely to be involved in a crash.

Over 1 million people/year die worldwide in traffic accidents. Self-driving cars can reduce it

Dr. Daniel Araya 2019 (technology consultant; Senior Partner with the World Legal Summit and Senior Fellow with the Centre for International Governance Innovation; PhD from Univ of Illinois at Urbana-Champagne) “The Big Challenges In Regulating Self-Driving Cars” 29 January 2019 <https://www.forbes.com/sites/danielaraya/2019/01/29/the-challenges-with-regulating-self-driving-cars/?sh=603bb153b260> (accessed 1 June 2021) (“hope is that or” should be “hope is that more” – we preserved the erroneous text as written in the original)

Nearly 1.3 million people die in traffic fatalities each year— 94% of these deaths are the result of human error. The hope is that or self-driving cars will significantly reduce this number by largely automating transportation. Studies suggest that AVs could save over half a million lives each decade. In addition to saving lives, self-driving cars will mean significant cost savings: Traffic accidents cost $500 billion worldwide each year. Self-driving car networks could mean drastically reducing insurance claims if not eliminating personal injury insurance altogether.

Over 38,000 people died in motor vehicle crashes in 2020 in the United States

Alexa Lardieri 2021 (journalist) US NEWS & WORLD REPORT 4 June 2021 Traffic Deaths Increased in 2020 Despite Fewer People on Roads During Pandemic <https://www.usnews.com/news/health-news/articles/2021-06-04/traffic-deaths-increased-in-2020-despite-fewer-people-on-roads-during-pandemic>

The [National Highway Traffic Safety Administration reported](https://www.nhtsa.gov/press-releases/2020-fatality-data-show-increased-traffic-fatalities-during-pandemic) that early estimates show 38,680 people died in motor vehicle traffic crashes in 2020, a 7.2% increase from the year prior. The figure is also the most traffic fatalities since 2007.

80 companies in 36 states are testing autonomous vehicles. Benefits: reducing crashes, lower fuel consumption, safer streets

Alexandra Green 2020 (B.A., University of Washington, 2015. J.D., Santa Clara University School of Law, 2020.) “THE SELF DRIVE ACT: AN OPPORTUNITY TO RE- LEGISLATE A MINIMUM CYBERSECURITY FEDERAL FRAMEWORK FOR AUTONOMOUS VEHICLES” 6 May 2020 <https://digitalcommons.law.scu.edu/cgi/viewcontent.cgi?article=2895&context=lawreview> (accessed 2 June 2021)

In June 2019, more than 1,400 autonomous vehicles were in testing by about eighty companies in thirty-six states plus Washington, D.C. across the nation. Due to safety features, many vehicles currently on the road are deemed to be semi-autonomous. These safety features include assisted parking and braking systems. However, only a few vehicles “have the capability to drive, steer, brake, and park themselves.” Both auto manufacturers and technology companies are investing in autonomous vehicles, even though the technology is far from perfect, for the purpose of eliminating human error and reducing crashes. Other benefits include efficient fuel consumption, time efficiency, monitoring of traffic, space savers, and safer streets.

Social Benefits

SELF DRIVE Act would produce social benefits that would drastically improve the lives of Americans

Maggie Miller 2020 (journalist) 23 Sept 2020 “House Republican introduces legislation to set standards for self-driving cars” THE HILL <https://thehill.com/policy/technology/517794-house-republican-introduces-legislation-to-set-standards-for-self-driving> (accessed 10 June 2021)

Rep. [Bob Latta](https://thehill.com/person/bob-latta) (R-Ohio) on Wednesday introduced legislation to set standards for the safety and security of autonomous vehicles. The Safely Ensuring Lives Future Deployment and Research in Vehicle Evolution Act, or [Self Drive Act](https://republicans-energycommerce.house.gov/wp-content/uploads/2020/09/2020.09.23-SELF-DRIVE.pdf), would provide standards for the testing and deployment of self-driving cars — including those on cybersecurity — along with improving the National Highway Traffic Safety Administration’s (NHTSA) ability to adapt federal driving regulations to autonomous vehicles. [**END QUOTE**] Latta, who serves as the ranking member of the House Energy and Commerce Subcommittee on Communications and Technology, along with Energy and Commerce Committee ranking member [Greg Walden](https://thehill.com/people/greg-walden) (R-Ore.) on Wednesday pointed to the legislation as necessary for the U.S. to win the “global race” on autonomous vehicles (AVs). “There is a clear global race to AVs and for the U.S. to win that race, Congress must act to create a national framework that provides developers certainty and a clear path to deployment,” Latta and Walden said in a joint statement. **[SHE GOES ON LATER IN THE CONTEXT QUOTE**:] “From increasing mobility for seniors and self-sufficiency for those with disabilities to providing contactless deliveries during the COVID-19 pandemic, AVs have limitless potential to drastically improve the lives of Americans.” “We cannot allow the U.S. to be outpaced and this effort strikes a critical balance of ensuring safe development and deployment of AVs while keeping the U.S. at the forefront,” they added.

Numerous benefits of AVs: improved safety, reduced emissions, public health, etc. And federal action will speed up the benefits

Republican caucus of the House Energy and Commerce Committee 2020 (The Committee on Energy and Commerce is a legislative committee in the U.S. House of Representatives) “ICYMI: Rep. Latta reintroduces SELF DRIVE Act” 23 September 2020 <https://republicans-energycommerce.house.gov/news/in-the-news/icymi-rep-latta-reintroduces-self-drive-act/> (accessed 1 June 2021)

While the benefits of AVs for American consumers – improving roadway safety, supporting self-sufficiency for seniors and those with disabilities, and more – were known well before COVID-19, the pandemic has proven another important benefit: contactless deliveries. We’ve[seen](https://republicans-energycommerce.house.gov/news/blog/self-driving-cars-can-pave-way-during-covid-19-lets-do-so-in-the-u-s/) AVs being put to work to help deliver medical supplies, groceries, and other supplies in local communities, and a [recent study](https://republicans-energycommerce.house.gov/news/in-the-news/icymi-av-deliveries-continue-to-show-promise/) showed AV deliveries can help our economy, public safety, carbon footprint, and more. A federal framework will provide innovators with the certainty they need to speed up deployment of these vehicles without compromising consumer safety.

China

China has distinct advantages in AV technology

Andrew Hawkins 2020 (He is a transportation reporter at The Verge, He covers ride-sharing services like Uber and Lyft, public transit, policy, infrastructure, autonomous vehicles, electric bikes, and the physical act of moving through space and time. Prior to this, he wrote about politics at Crain's New York Business and the New York Daily News.) 11 February 2020 “We still can’t agree how to regulate self-driving cars” <https://www.theverge.com/2020/2/11/21133389/house-energy-commerce-self-driving-car-hearing-bill-2020> (accessed 1 June 2021)

To be sure, autonomous vehicle operators based in the US are way ahead of their competitors in China, in terms of on-road testing and miles traveled. But there is a regulatory imbalance that experts say could narrow the gap. China has a master plan to lead in next-generation technology, including autonomous vehicles. There are several Chinese companies in the race, including Baidu, Pony, TuSimple, and AutoX, that make great use of talent and resources in Silicon Valley to advance their capabilities. But the US still has the edge. “Waymo, of course, way out in front of everyone,” Michael Dunne, who runs the automotive consulting group ZoZo Go, told The Verge. “But these Chinese outfits are led by US-educated Chinese people with a global reach and mindset ... Where China could race ahead is in regulations around data collection and swapping measures to convert roads and even cities to all autonomous.”

Chinese advantage

Christina Bonnington 2018 (journalist; technology writer)“Does the Senate Know Anything About Self-Driving Cars?” 19 January 2018 <https://slate.com/technology/2018/01/do-senators-holding-up-the-self-driving-car-bill-know-what-theyre-talking-about.html> (accessed 1 June 2021)

It’s also worth noting that these companies aren’t just looking to best one another at creating the first publicly available self-driving vehicle. They are also working to beat international competitors, specifically autonomous car developments in China, where companies face far less legislative pushback and far more consumer support than they do here in the U.S. China may already have an edge: It recently opened up select roadways for autonomous vehicle testing and is already testing out a self-driving bus project. Preventing U.S. companies from expanding their testing efforts on our nation’s major arteries could bar American companies from leading in this space.

China: U.S. has the edge now, but will lose it without Congressional action

Andrew Hawkins 2020 (transportation reporter at The Verge) 11 February 2020 “We still can’t agree how to regulate self-driving cars” <https://www.theverge.com/2020/2/11/21133389/house-energy-commerce-self-driving-car-hearing-bill-2020> (accessed 1 June 2021)

This nuance was largely lost amid the fear mongering from lawmakers and stakeholders about China’s imminent dominance in autonomous vehicles — though Alliance for Automotive Innovation president John Bozzella did make one attempt at a clarification. “I do think we have a lead right now,” said Bozzella, whose group represents major automakers like Ford, GM, BMW, Honda, Volkswagen, and Toyota. “My concern is we’re likely to stall if congressional action doesn’t go forward.”

Application: China is testing in high population areas

Larry Mullin 2020 (journalist based in Beijing.) “China’s cities will soon be crawling with self-driving robotaxis” 24 September 2020 <https://www.fastcompany.com/90553995/chinas-cities-will-soon-be-crawling-with-self-driving-robotaxis> (accessed 2 June 2021)

Russo explains that AutoX and Didi are both aiming to demonstrate by 2023 that the technology is safe and viable in densely populated areas. It’s a huge technical challenge, one that major American players such as Waymo (from Google), Cruise, Argo.ai, and Zoox (acquired by Amazon) have yet to master. Russo says that some of those companies are running pilots in cities such as San Francisco, with a focus on low-density road testing, often in defined, “geofenced” areas. AutoX—which is [headquartered in Hong Kong](https://www.chinamoneynetwork.com/2019/04/10/chinese-state-owned-automaker-dongfeng-backs-self-driving-start-up-autox-in-new-round) and recently opened [an R&D center in Shenzhen](https://techcrunch.com/2019/06/19/autox-pony-ai-california-robotaxis/)—also has a strong stateside presence with a team of over 100 R&D engineers. It is just the second company to receive a California Driverless Permit for robotaxis at speeds up to 45 mph, [after Waymo](https://www.theverge.com/2019/7/3/20680938/waymo-self-driving-cars-passengers-permit-california-pick-up).

DISAD RESPONSES

A/T “AVs can be hacked” – so can normal cars

Ariel Darvish 2018 (JD candidate at Fordham Law School; BA in Accounting from Queens College) “The SELF DRIVE Act: Cybersecurity and Cars on Autopilot” 15 January 2018 <https://news.law.fordham.edu/jcfl/2018/01/15/the-self-drive-act-cybersecurity-and-cars-on-autopilot/> (accessed 1 June 2021)

Modern cars which lack self-driving capabilities are also susceptible to hacking. Not only is there a concern that hackers can take over the locking system, steering, and brakes of a car, but there is also an additional personal information security concern which exists with cars to which a smartphone is connected. When a smartphone is connected to a car, all of the personal information of the user which is recorded on the smartphone is accessible to hackers. Although there has not been significant regulation in relation to the cybersecurity of such cars, automakers have taken the issue seriously, and created the Automotive Information Sharing and Analysis Center (“Auto ISAC”) “to act as a clearinghouse for industry best practices” in relation to cybersecurity. Both Auto ISAC and the NHTSA have released publications which indicate best practices for automobile cybersecurity, and provide detailed practices and policies for automakers to adopt in order to prevent hacks or information leaks. With the transition to self-driving cars, whose cybersecurity risk is much higher, automakers will need to come up with “many dynamic solutions” and “multiple layers of security to make it as hard as possible for hackers to attack a car.”

A/T “Dangerous to drive” – Pilot programs have been on the roads for years

Christina Bonnington 2018 (She is a technology writer whose work has appeared in Wired, Refinery29, the Daily Dot, and elsewhere.)“Does the Senate Know Anything About Self-Driving Cars?” 19 January 2018 <https://slate.com/technology/2018/01/do-senators-holding-up-the-self-driving-car-bill-know-what-theyre-talking-about.html> (accessed 1 June 2021)

In that regard, these companies have been developing, iterating, and testing their work in an ever-growing capacity. Startups such as Google’s Waymo spinoff, for example, have been testing self-driving car technology for the better part of a decade now. Self-driving car pilots are taking place all over the country—ride-share company Lyft has begun testing in Boston and Las Vegas, while competitor Uber has vehicles driving in Tempe, Arizona, and Pittsburgh. Waymo has a beta program in Phoenix and has even begun testing vehicles on public roadways sans a human technician behind the wheel. Volvo, Ford, Fiat Chrysler, and others are working on various aspects of self-driving car technology and testing as well.

A/T “Dangerous to drive” – Already testing in remote areas

Christina Bonnington 2018 (She is a technology writer whose work has appeared in Wired, Refinery29, the Daily Dot, and elsewhere.)“Does the Senate Know Anything About Self-Driving Cars?” 19 January 2018 <https://slate.com/technology/2018/01/do-senators-holding-up-the-self-driving-car-bill-know-what-theyre-talking-about.html> (accessed 1 June 2021)

“I think you go to less complicated areas to do your testing, not in the middle of jammed freeways with frustrated drivers,” Feinstein said in December 2017.

The problem is, that is exactly what these companies are already doing—they’re testing their vehicles in and around their own campuses, in cities that present fewer (or very specific) challenges to their cars, and in retirement communities with low speed limits and preplanned, logically laid out road maps. Some of these companies—not every company, necessarily—are ready to take that next step and put their vehicles on high-speed roadways alongside living, breathing humans.

A/T “Dangerous” - Afraid of AVs? Don’t be. They’re like elevators.

Dr. Daniel Araya 2019 (technology consultant; Senior Partner with the World Legal Summit and Senior Fellow with the Centre for International Governance Innovation; PhD from Univ of Illinois at Urbana-Champagne) “The Big Challenges In Regulating Self-Driving Cars” 29 January 2019 <https://www.forbes.com/sites/danielaraya/2019/01/29/the-challenges-with-regulating-self-driving-cars/?sh=603bb153b260> (accessed 1 June 2021)

The truth is that self-driving cars are not as radical as they might seem. AV technology builds on many existing innovations impacting related industries including factory production (machine automation), telecommunications (information technology), aircraft control systems (autopilot) and terrestrial navigation (GPS). In fact, there is a counter-intuitive analogy that makes driverless cars less inexplicable. Long before the arrival of self-driving cars, there was the elevator. Elevators transformed how humans physically move through buildings, eventually eliminating the need for human operators altogether.

A/T “Trucks” – bill regulates trucking differently

Jack Denton 2018 (He is a contributing writer at Pacific Standard. He was previously a producer for The Brian Lehrer Show, a news-and-politics talk show on New York Public Radio, and a reporter for Solitary Watch. His work has also been featured on Gothamist and Impose Magazine. He is a graduate of the University of North Carolina–Chapel Hill.) “ARE THE TEAMSTERS TRYING TO KILL DRIVERLESS TECH, OR SAVE THE TRUCK DRIVERS?” 26 April 2018 <https://psmag.com/economics/trucking-teamsters-driverless-tech> (accessed 2 June 2021)

But among the litany of concerns being raised by organized labor as artificial intelligence prepares to take the wheel, union dues are small fries. In September, the House of Representatives passed the bipartisan [SELF-DRIVE ACT](https://www.congress.gov/bill/115th-congress/house-bill/3388/text), which would allow 100,000 autonomous vehicles to be street-tested each year without meeting federal vehicle safety standards that currently govern all automobiles on the road. Under the bill's proposed regime, large commercial trucksweighing more than 10,000 pounds would not be exempted from the traditional federal vehicle safety regulations.

A/T “Job loss” – no evidence

Marc Scribner 2018 (He was a senior fellow at the Competitive Enterprise Institute. Scribner joined CEI in 2008. He focuses on transportation, land use, and urban growth policy issues. These include infrastructure investment and operations, transportation safety and security, risk and regulation, privatization and public finance, urban redevelopment and property rights, and emerging transportation technologies such as automated road vehicles and unmanned aircraft systems. He frequently advises policy makers on these matters at the federal, state, and local levels.) “Debunking the Dilatory Objections to the AV START Act” 22 May 2018 <https://cei.org/blog/debunking-the-dilatory-objections-to-the-av-start-act/> (accessed 3 June 2021)

Neither the SELF DRIVE Act nor the AV START Act are perfect bills. Concessions were made to appease various interest groups. For instance, due to objections from organized labor, neither of the bills address heavy trucks because the Teamsters’ union believes—without any basis—its truck driver members face imminent job losses from robo-trucks (despite the technology being nowhere close to fully relieving human beings from all driver responsibilities and a chronic driver shortage in the industry). That said, the bills have been endorsed by hundreds of companies and organizations, ranging from tech startups and Detroit’s Big Three to disability rights advocates and free-market organizations. Unfortunately, a handful of consumerist groups, a number of which oppose any real-world testing of HAVs, have managed to spook a handful of technophobic senators led by the AV Delay Five.

A/T “Exemptions are unsafe” – must be at least as safe as normal cars

Marc Scribner 2018 (He was a senior fellow at the Competitive Enterprise Institute. Scribner joined CEI in 2008. He focuses on transportation, land use, and urban growth policy issues. These include infrastructure investment and operations, transportation safety and security, risk and regulation, privatization and public finance, urban redevelopment and property rights, and emerging transportation technologies such as automated road vehicles and unmanned aircraft systems. He frequently advises policy makers on these matters at the federal, state, and local levels.) “Debunking the Dilatory Objections to the AV START Act” 22 May 2018 <https://cei.org/blog/debunking-the-dilatory-objections-to-the-av-start-act/> [note: the “AV Delay Five” refers to a group of Senators] (accessed 3 June 2021)

The first two sentences here are meaningless, as the bill does nothing to upend NHTSA’s longstanding exemption process. In order for a manufacturer to obtain approval for a temporary exemption from an FMVSS, it must meet one of four conditions. The condition under which HAV developers would likely seek exemptions from FMVSS is for sale or consumer deployment. This condition at 49 U.S.C. § 30113(b)(3)(B)(iv) reads: “compliance with the standard would prevent the manufacturer from selling a motor vehicle with an overall safety level at least equal to the overall safety level of nonexempt vehicles” (emphasis added). So, the stated fears of the AV Delay Five, that “the interim framework must provide the same level of safety as current standards,” ought to be allayed because Section 6 of the AV START Act does nothing to change this existing statutory requirement. The same safety equivalence requirement applies to manufacturers seeking a development or field evaluation exemption for a new safety feature under 49 U.S.C. § 30113(b)(3)(B)(ii). Phew!