PRO/CON: Will self-driving cars be good for America?

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Jessie Lorenz of the Independent Living Resource Center in San Francisco, California, who is blind, touches the two-seater prototype of Google's self-driving car at Google headquarters in Mountain View, California, May 13, 2015. Photo: LiPo Ching/Bay Area News Group/TNS

PRO: America's been ready for self-driving cars since the horse-and-buggy days

Are Americans ready for autonomous cars? They have been ready for more than a century.

The horses that pulled buggies were autonomous, capable of finding their way home with little or no help from their drivers. So, autonomous travel is nothing new. It's just better.

At the beginning of the 20th century, as the number of vehicles increased, the rate of deaths and injuries caused by vehicular accidents likewise jumped. Although modern technology and safer construction has helped decrease the number of fatal crashes in recent decades, the numbers remain staggering.

In the U.S. alone, vehicular accidents have killed more than 32,000 people annually for the past five years for which data is available. That's as if five 737 jets crashed every week. It is more than double the number of people who have died worldwide in the recent Ebola epidemic.

The National Highway Traffic Safety Administration estimates that between 93 percent and 95 percent of these accidents are caused by human error.

In addition to deaths, vehicle accidents send about 2.5 million people per year to emergency rooms. The NHTSA estimates the U.S. economic and social costs of vehicle accidents, excluding the cost of car ownership, at $871 billion a year.

Take a simple test. In your local newspaper, carefully read each account of a person killed or injured by vehicles. Then ask, would this tragedy have been avoided, or the injury mitigated, if one or more of the vehicles had been self-driving?

We tolerate this carnage because cars bring great utility and freedom. Self-driving vehicles deliver even greater utility by freeing driving time for other things — be it texting, working or just relaxing.

Self-driving cars also deliver huge benefits to the disabled and the elderly who would otherwise lose their licenses. At the same time, self-driving cars remove much of the human error that contributes to the vast majority of injuries and deaths.

Self-driving cars also deliver a number of broader social utilities. These range from far more efficient use of our present land and infrastructure to more overall productive lives.

Americans have dreamed of driverless, horseless carriages since the '30s, but their advent had to await the development of cheap and convenient computing power. Let's look at a few interesting facts.

Young people today seem far less enamored with driving than in the recent past. If they license at all, many license much later and drive fewer miles. Rather than driving to see friends, they may opt to text or call. Smartphones rather than cars may be today's status symbol.

In addition, car ownership is a major expense. Using fleets of on-call vehicles saves not only the cost of a depreciating asset that spends 95 percent of its time idle, but also saves on the other major cost of a car: insurance.

When polled about self-driving cars, potential customers cite higher safety and lower insurance costs as the two most persuasive factors.

Indeed, in many respects, self-driving cars are already here. You may be followed by one. Some of the most recent safety improvements will virtually drive the car. Adaptive cruise control, lane keeping, traffic jam and parking assist are just the most recent developments in a clear trajectory toward self-driving cars.

Of course, self-driving cars will not create utopia. There will still be some accidents, although far fewer. There will be some people who will never give up their cars. There will be some who live in areas difficult to serve with self-driving cars.

Some regulators may stall because they fear criticism after the first unfortunate fatality. And there will be some who will argue self-driving cars are unsafe because they see them as a threat to their business. One can hardly expect emergency rooms and funeral parlors to argue they need more business.

Self-driving cars offer such a wealth of advantages that it makes little difference whether Americans are ready. Americans need to get ready. Just look in the mirror.

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CON: Self-driving cars may be more lethal than we think

No one likes a backseat driver. Nagging, nannying. Questioning every decision, constantly attempting to correct what he or she considers to be your errors of judgment.

How about an it doing the same thing? One you can't kick to the curb?

The it in question being the backseat computer. Under the dash somewhere, actually. The one that will in the not-far future take over the driving and not just second-guess yours.

It's the self-driving or autonomous car. And it's no longer science fiction. In fact, it's already here. Bits and pieces of it, anyhow. Many new cars can park themselves, for instance. Others have collision avoidance systems that can completely stop the car without the driver even touching the brakes.

Next year, GM's Cadillac division will debut vehicle-to-vehicle, or V2V, communications in some models.

The system makes it possible for cars so equipped to have electronic conversations among themselves — to be aware of one another's relative position and velocity — in order to anticipate and hopefully avoid potential collisions such as might otherwise happen when, for instance, car A runs a red light because its driver wasn't paying attention and strikes car B.

With V2V, the driver of car A would be safety-netted by his car. It would brake for the light and so avoid striking car B.

These are some of the elements of the fully autonomous, self-driving car. And some of it sounds good — and may well be. But taking the driver out of the equation entirely — or relying too much on technology — can have its downsides, too.

As anyone who owns a PC knows, computers develop glitches sometimes. It's annoying when it happens at your desk. But it could be lethal when it happens at 75 mph on the freeway.

And it's probably more likely to happen with an autonomous car, because the computer that controls it — unlike the computer on your desk — will be subjected to extremes of heat and cold, vibration and moisture, et cetera.

Over time, something's likely to go on the fritz. If the human driver has become a mere passenger — no longer expected or perhaps even able to actually drive the car — what will happen?

And who will be responsible? Legally speaking, the driver is currently responsible for the safe operation of his vehicle.

But how can we hold him responsible when he's no longer the driver?

Will the manufacturer of the self-driving car be liable in that case?

How will car insurance requirements and costs change?

If the driver no longer is a driver, why should he be required to buy insurance at all? Or have a license, for that matter? When you ride the bus you are not required to have a special permit — or carry coverage. Why wouldn't the same principle apply here?

An even bigger problem with autonomous cars is how to program them to disregard traffic laws when it's necessary to do so in order to avoid an accident.

For example, it's illegal to cross the double yellow line — but what if a child runs into the car's path and the only way to avoid hitting her is to swerve out of the way?

It's illegal, technically, to cross the double yellow — but it's the right thing to do. And a human driver would do it. An autonomous car wouldn't. Because it is programmed to obey the law. Unlike humans, it cannot use judgment; does not do nuance.

Also, how will autonomous cars deal with cars not autonomous, and what about the reverse? Will people who own human-controlled cars be required to turn their cars in or no longer be allowed to drive them?

Technology is usually a good thing, but problems arise when technology is no longer under human control, as could happen here.

Technology that assists human drivers — that's a great idea. But technology that pre-empts them and dumbs them down — that could be a very bad idea, indeed.