As Pedestrian Deaths Spike, Scientists Scramble for Answers

www.wired.com By Nick Stockton March 22, 2018

On Monday, the nascent self-driving vehicle sector reached an unfortunate milestone when, for the first time, a self-driving car killed a pedestrian in Tempe, Arizona. This also means robot drivers are becoming more like their human predecessors—who kill thousands of pedestrians every year.

And that number has risen dramatically in the past several years. In 2016, cars hit and killed nearly 6,000 pedestrians. That's a serious spike from the historic low—below 4,000—in 2009.

The Great Recession explains some of the fluctuation. When fewer people have jobs, they spend less time out and about, and their exposure to potential crashes drops. When times are good, the opposite happens. "Economic changes do give us a good idea of the general direction of traffic deaths," says Richard Retting, the general manager of Sam Schwartz, a New York City–based traffic engineering firm. But the American economy's steady recovery can't account for the 50 percent climb in pedestrian fatalities in the space of a few years.

OK, how about other factors? Demographics matter. "We know that a 60-year-old person hit by a car is more likely to die than a 25-year-old," says Laura Sandt, the director of the Pedestrian and Bicycle Information Center at the University of North Carolina. She says her team factors in things like time of day and the weather—both of which might influence visibility and behavioral choices, like whether or not a person might be drunk. Intoxicated drivers *and* pedestrians are more likely to be involved in fatal crashes.

Then there are design factors, like the speed limit. Faster cars are more likely to hit, and kill, slow, soft bodies. "In a lot of places where pedestrian crashes occur, the road isn't inherently safe for all modes of travel," says Sandt.

The federal Department of Transportation started tracking pedestrian traffic deaths in 1975, and the early numbers painted a stark picture. In 1979, the all-time high, cars killed more than 8,000 pedestrians. In the ensuing decades, activists have pushed those in power to make the streets safer, with policies like lower speed limits, more crosswalks, and stiffer punishments for drunk drivers.

"From the high in 1979 to 2009 we've cut the number in half, which is nothing short of remarkable," Retting says. And look, the decline wasn't steady. Economics has always maintained its tidal hold over the ebb and flow of pedestrian safety, and politicians seem perennially inclined toward infrastructure that favors cars. But the upward trend in pedestrian safety seemed inexorable.

That is, until 2010, when pedestrian fatalities jumped back up. And then kept climbing. "Something remarkable has happened to cause this other than the economy improving," Retting says. He says he has looked at every variable he can think of, but none explains numbers that he describes as "jumping off the graph." The US has experienced economic booms without such dramatic jumps in pedestrian deaths. And while more people are taking public transportation (and thus spending more time on foot), Retting has looked at data from numerous public transit agencies, and says those don't hold the answer either. "I'm not sitting here with a smile on my face saying this is some great research opportunity, either," he says. "I'd like to put out a report, but we just don't have enough data."

He suspects the spike in deaths may be coming from a factor outside his discipline's regular datasets: smartphone use. Between 2010 and 2016, the number of smartphones in the US increased from 78 million to 262 million. In the same time period, annual wireless data use rose nearly 400 percent.

"We already know that distraction is a serious concern for both drivers and pedestrians," Retting says. "When people aren't seeing threats, it makes everyone more vulnerable." He doesn't have enough data to determine a causal relationship—only that there *is* a correlation between smartphone use and the uptick in pedestrian traffic deaths.

Car crash fatalities have risen recently too, but not as steeply as pedestrian deaths. This is most likely thanks to manufacturers designing safer cars that protect their occupants in crashes, along with advanced safety features like automatic emergency braking, which are stepping stones on the way to fully autonomous vehicles. (CONTINUED…)

Sandt agrees those macro level trends are compelling, and likens the uptick in phone use to a form of impairment, comparable to the way drinking or drugs affect the brain. (Incidentally, Retting's research shows that the eight states that have legalized recreational cannabis saw a 16.4 increase in pedestrian traffic deaths between 2016 and 2017.) But to provide policymakers with potential fixes, she says researchers need to know more. "Our problem is we don't have good data for fatal pedestrian crashes on mobile device use."

And that data is really hard to collect. Investigations can be hobbled by the fact that in many collisions between cars and pedestrians, the people inside the vehicle survive and the people outside do not. "There's only one side of the story being told, and the driver has a big motivation to not acknowledge any distraction," says Retting. Police can examine people's phones, but without knowing exactly when a crash occurred, down to the second, they can't sync it to call logs or browser activity. Also, about one fifth of all pedestrian traffic fatalities are from hit and run collisions. Besides tragic, that's a huge gap in data.

Many states recognize distracted driving as a problem—47 ban texting and driving; 15 don't allow drivers to use handheld cell phones whatsoever. Some have gone further. Honolulu now tickets pedestrians who stare at their phones while crossing the street. The small California town of Montclair does too. And places in Connecticut, New Jersey, and Canada are considering similar bills.

Great, fine, understandable, and totally fair to say people should pay attention to where they're going, but that doesn't mean it'll work. Laws like these assign the blame on drivers and pedestrians, when in many cases there's a shared responsibility that goes beyond the people left injured, traumatized, or dead.

"In addition to encouraging individuals to behave safely, those responsible for designing the vehicles and roadways need to work on making it easier for people to choose the safe behavior," Sandt says, "and to be sure that they are investing in infrastructure and creating policies that support safe walking."

That means more of the same tactics that have driven down deaths in the past: lowering speed limits, reworking infrastructure to make it easier and safer to cross the street, designing roads with everyone in mind. Because, even when the robot drivers arrive, they'll have to share the road with the humans.

Driving Dumb

- You wanna stop distracted driving? Make cars that watch humans
- Why Mazda's newly patented driver assistance system could make driving more fun—and more safe
- It's not in your head: That red light camera's timing may be off

NCDOT Awards 2018 Bicycle and Pedestrian Planning Grants

NCDOT News Releases March 21, 2018

Raleigh – Nine municipalities and one county from across the state will receive assistance with bicycle and pedestrian planning, thanks to grants awarded this month by the N.C. Department of Transportation.

Recipients were selected from a pool of 23 applications by an awards committee comprised of representatives from regional planning organizations and councils of government, local governments, health professionals and NCDOT staff from multiple units.

This year's recipients include:

- Archer Lodge (joint bicycle/pedestrian plan) (CONTINUED…)

- Beaufort County (bicycle plan)
- Carrboro (bicycle plan)
- Elkin (bicycle/pedestrian plan)
- Fayetteville (bicycle plan)
- Hudson (bicycle/pedestrian plan)
- Lowell (bicycle/pedestrian plan)
- Pittsboro (joint bicycle/pedestrian plan)
- Warrenton (joint bicycle/pedestrian plan)
- Wilson (pedestrian plan)

Plans funded are not for one specific project, but represent a comprehensive strategy for expanding bicycle and pedestrian opportunities within a given municipality. These plans address facilities, programs, services and regulations that encourage safe walking and bicycling. Now in its fifteenth year, the Bicycle and Pedestrian Planning Grant program has awarded over $5 million for 193 community plans.

For more information on the Bicycle and Pedestrian Planning Grant Initiative, contact the Division of Bicycle and Pedestrian Transportation or visit the Planning Grant Initiative website.

Where's the Durham-Orange light rail? Local officials buying land, hopeful for future

The Herald-Sun By Tammy Grubb March 16, 2018

DURHAM **–** As Congress debates next year's federal budget, local officials learned Wednesday that GoTriangle now owns all the land needed for a light-rail operations and maintenance center in southeastern Durham.

The center will house a couple dozen trains, plus operators, mechanics and other staff, serving the 17.7-mile Durham-Orange light-rail system between UNC Hospitals in Chapel Hill and Duke and N.C. Central universities in Durham.

A dozen parcels make up the 25-acre Farrington Road site, whose neighbors have expressed concerns about noise and light pollution, potentially toxic chemicals that might be used to clean or service the trains, and about having an industrial operation in their residential neighborhood.

Transit officials counter that light-rail maintenance centers do not use hazardous materials or generate much noise and traffic.

Residents don't have to leave the site until 2019, said Matthew Clark, GoTriangle's government affairs manager. However, the city of Durham needs to annex and rezone the site this year so GoTriangle can meet Federal Transit Administration requirements, he said.

The regional transit agency bought some lots outright, transit planner Geoff Greene said, but six are being taken by eminent domain, which is allowed for public projects but requires settling on a fair price. Other landowners are willing to sell, Clark said, but GoTriangle's had to condemn those lots now while negotiating the price to meet the deadline for a federal grant agreement. (CONTINUED…)

"The FTA has bumped us up to September 2019, and that is great news, because it provides us some flexibility in terms of both finance and construction scheduling," Clark said. "But it's an aggressive schedule."

The light rail project will need both $247 million in state and $1.23 billion in federal funding to move forward. Durham and Orange counties will split the remaining $988 million, plus roughly $890 million in interest on short- and long-term debt.

Although federal funding has been in doubt since President Donald Trump took office, GoTriangle and local officials remain optimistic that there's enough support in Congress to protect current transit funding.

Trump's $1.5 trillion infrastructure plan, released last month, limits the funding available for new projects, including transit, and caps each project's "incentive" at 20 percent of construction costs. That mean projects would need more local, state and private money.

Orange County Commissioner Renee Price said Trump's infrastructure plan was discussed at a conference in Washington, D.C., last week, which included DJ Gribbin, special assistant to the president for infrastructure policy. Gribbin said the administration expects public-private partnerships to lead the way on big projects, like the light rail, Price said.

"He was addressing the board of directors [for] the National Association of Counties (NACo), saying expect about 14 percent and come to us and let us know how you are going to raise the rest of the money," she said.

Durham County Commissioner Ellen Reckhow interjected to say she also attended the conference but heard different information at a Transportation Steering Committee presentation.

Kevin Stone, NACo's associate legislative director for transportation and infrastructure, "said in no uncertain terms what they're hearing is that there's no appetite for changing the base (transit) programs right now," Reckhow said.

The Triangle's congressional delegation confirmed that support, Durham County Commissioners Chairwoman Wendy Jacobs said.

Transit funding is "at $2.3 billion in the Senate budget and $1.7 (billion) in the House, but people are thinking that it's going to be the Senate number, so the president may have put out a plan, but the key thing is it's Congress that approves what the funding is," Jacobs said. "And right now, there's very strong support for keeping these programs going, and that's the most important thing."

Orange Grove Road Bridge Fencing

Photo courtesy of Heidi Perry