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Transcript

Speaker 1

It's time for the outspoken cyclist your weekly conversation about bicycles, cyclists, trails, travel, advocacy, the bike industry, and much, much more. You can subscribe to our weekly podcast at outspokencyclists.com or through your favorite podcasting app to listen anytime. Now here's your host, Diane Jenks.

Speaker 2

Hello and welcome to the outspoken cyclist. I'm your host, Diane Jenks. Thanks for tuning in today. This episode of our show was intended to highlight another great riding trail, along with the conversation with renowned traffic engineer and planner Professor W Marshall at the University of Colorado in Denver. But my conversation with Wes happened the day after the news of the deaths of Johnny and Matthew Goudreau, and when we logged in to talk, we had both been reading the same news summary. The horror and disbelief of the tragedy really struck me hard, and because so much of the topics Wes and I were to talk about were directly connected to the issues we have with traffic and safety, I decided to let this episode stand alone.

Speaker

Alone.

Speaker 2

Professor Marshall's new book, killed by a traffic engineer, shattering the delusion that science underlies our transportation system, offers ideas, data options, and a broad observation of what we're getting wrong about the way we not only do transportation and safety, but how we think about it in the first place. I think you will enjoy our conversation and in the least instance get some valuable insight into what traffic engineers are and need to be. Hi, Wes. Welcome to the outspoken cyclist. Thanks for joining me. Take 2. So instead of my screwing up last time we get to do this all over again since I forgot to hit the record button on zoom. But we're doing this. So how are you?

Speaker 3

I'm good. Good to see you again long.

Speaker 2

Time too. Yeah, it's been about almost a a month, maybe a few weeks. School has started where you are, yes.

Speaker 3

Yes, it has. This is our second week, so. We're just finishing that up.

Speaker 2

Wow. Well, so you are out in Colorado? And you are a. Traffic, a transportation traffic engineer which? And when we talked last time, you explained to me that there are only two of you out there and it's a it's a program that isn't offered all over the country. Explain what you do, what a traffic engineer does.

Speaker 3

Yeah, I mean, so I mean, I guess more generally, I'm a transportation engineer. So I do all sorts of stuff in that realm and it falls within the umbrella of civil engineering. And you know, there's a lot of schools in the state of Colorado that have a civil engineering program, but within civil, you have structural, you have environmental, you might have geotechnical. Hydrology stuff like that, transportation is. One of them for whatever. Reason we're the only university in Colorado that has transportation as one. Of. Like their sub specialties. So it's just myself and Aditi Misra, my neighbor here in my office that so we're the only two in the state. There are other people doing transportation, urban planners, geographers like public health folks. But we're the only. Ones that sort of fall under that transportation engineering umbrella.

Speaker 2

So just as a sort of painting with A broad brush, what exactly is transportation engineering?

Speaker 3

Well, it's funny because civil is so broad, but so is transportation engineering. I I think you know, you could be doing something like, you know, designing the cross section of a pavement, like how much asphalt do we need? How much gravel do we need? Or you could be going to community meetings, talking with disadvantaged neighborhoods about. You know, potential infrastructure that's going through there. You know, I think a lot of us think of it more as you know, people. That are designing what our traffic lights are doing and stuff like that, but that's a part of it. I mean, a lot of it is, you know, forecasting what might be happening 20 years in the future, thinking about how land uses are changing, thinking about how mode choice might change and trying to design for those predicted futures, you know, other times you're designing a sidewalk or a bike lane. Or a curb ramp. So it's it's, it's good in that way. I mean cause my my advisor, my PhD advisor Norman Garrick, he was one of the people that was designing asphalt like that, sort of. That was his research. That was his life. He hated it and he almost quit his tenure job at University of Connecticut. And then he took a sabbatical in England and it

totally revamped his thinking on what transportation is, what it's for, what can what it can be. And he just changed his research the complete 180. But it's still with the under the same civil engineering. Transportation engineering, umbrella and he ended up doing stuff more like I do. No.

Speaker 2

Well, and I want we want to talk about your book because that's sort of from what I can hear and from what people are telling me, it's put you and this whole idea of transportation engineering on. The. Map pretty provocative title killed by a traffic engineer, shattering the delusion that science underlies our transportation system and. So. It covers so. Much stuff and we're not going to cover the whole book, but there are several chapters I do want to. Cover what is. The delusion about science in our transportation. System.

Speaker 3

That's a good question, I think. It's that we and and by we I'm talking about like the transportation engineers, the traffic engineers like we truly believe that I mean everything we're doing is steeped in a century of scientific safety research. So. What I'm saying by deluded is we actually believe this. So even despite the initial title killed by. Engineer I'm not necessarily blaming the ones today for what they're doing because they're doing what they're taught they're doing what is in the manuals and our guidelines and like they're doing their best they can. They're not killing people intentionally, but they are deliberately putting out things that are unsafe. So. You know, when we cut down St. trees in the city to provide a clear zone or increase the speed limit to, you know, maps like our protocols for the 85th percentile speed. Like we actually think these things will improve safety. And if you look at the initial research to lead us to believe these things, it is so limited, it's so flawed and a lot of times they weren't even looking at safety outcomes. But. We're still doing that today and I don't think the traffic engineers or a lot of people know how little there is behind a lot of the things we're doing.

Speaker 2

Yeah, that's kind of scary when you think about it. And and I want to bring up you and I were talking about this before we actually came on air, and that's about the two brothers, the the hockey players, one from the blue. I remember jackets here, you know, 5 jackets and and the other his brother. And they were in.

Speaker 3

On the Blue Jackets, yeah.

Speaker 2

The east on the East Coast in New Jersey for their sister's wedding. Both get hit from behind and they both died. So if you if you could dissect that. Well, you were just reading. The article the same as as I was.

Speaker

Yeah.

Speaker 2

What went wrong and what might have changed that other than the fact that of course? We had a freaking. Drunk driver, but something out. Other things could have gone wrong there.

Speaker 3

Yeah, I haven't seen what the road looks like, but from what I'm reading, it sounds like they're on a rural. You know, rural highway like A2 Lane Rd. And there might have been, you know, the two way turn lane in the middle and it sounds like they were in the shoulder and you know. Car was taking a left turn, the car behind it tried to go around him and ended up killing these guys and that there ever happened to be drunk so. I. Think it's easy for the world? It's easy for traffic engineers to look at this as a drunk driving crash, and that's it. Like we just blame it on, you know, this driver did something. Badly and. And. You know, we need to maybe educate them or enforce things, but at the same time. I mean, I don't think any of us want our lives to be dependent upon other people having to make good choices, right? So. I mean, this is a situation where. Yeah. And I know in Colorado we have a lot of these off street bike trails that run parallel to rural, rural roads like that, so.

Speaker

So.

Speaker 3

That, to me could be an engineering solution like we could have engineered this road in a way where, you know Johnny Hockey, this I know he went to Boston College. That's the area I'm from. He could have been in a much safer place, but we didn't provide that sort of Rd. environment for him. And like the bigger problem I see is we're going to look at the data. And never even think we have a problem that needs to be fixed and but we I mean. The traffic engineers like for the sake of the police, for the sake of the insurance companies. Yeah, it's the driver's fault. I don't want to take them off the hook by any means. But engineers should not be walking away thinking that there isn't something we can do and do better.

Speaker 2

OK, that's that's that's a good thing. The question is, will they and can they and do they? So last time we talked one of my favorite chapters of the book is the If only chapter and and this sort of goes along with it that alright. If only he hadn't been drunk. But on the other side of that is if only he'd been wearing a helmet if only been wearing brighter clothes. If only whatever it is. To be more visible. What can we change? How can we

change the public perception about it, always pointing the finger at the victim in the in these cases, bike bicyclists and pedestrians are killed, named, whatever. And oftentimes there's no recourse. I mean, you know, it's their fault.

Speaker 3

I mean, I think it's for traffic engineers to start looking at every severe injury or fatal crash as. Trying to understand why these road users are doing what they're doing, but also understanding that maybe there's an engineering solution that we can use. So if we just simply chalk up, you know, 90 plus percent of our fatalities to human error problems, we end up just focusing on, you know, public service announcements or trying to get the police to. Go out there and enforce the rules. Better you know, I think our thinking is that, hey, we provided a train safe transportation system. If everybody followed the rules of the road like we laid out for you, you'd all be safe like this is you. Fault, but it's just not true. I mean, that's not the way the world works. There's. Systemic crashes that are happening, they're predictable, and to me, if they're predictable, we should be able to prevent them, like in that. If only chapter and like it. It also talks about, you know, some of. The. Like the way the news articles are written, like by writing and the one I was looking at about this crash in New Jersey with the hockey players. The headline makes it seem like an autonomous. Car hit these guys.

Speaker

Right.

Speaker 3

Right. And they also put it in the passive voice. So the bicyclist was hit by instead of driver. It's bicyclists, right? So it can be much more direct. You know, and there's some interesting research out there showing that if we write. About these types of crashes in that way, and if you provide a little context and say that you know, maybe this is a road that's had a lot of. Safety issues in the past and then people walk away like the research shows that people walk away with a much different perspective on what needs to be done. They're thinking more about engineering solutions. They're not thinking about. PSA's that we know don't work, but we still put out. I think I heard nationally put \$600 million a year into, you know, just commercials to tell people to be better. That money could be going into bike facilities and the sidewalks into the fundamentals that make our streets safer.

Speaker 2

Well, let's talk a second about infrastructure and how things can change. I know there are more paths, more buffered bike lanes, more infrastructure that's being offered and built. But they still are widening highways. They're still not narrowing streets. They're still not planting enough trees. Is the profession your profession starting to actually make some of these recommendations? And will they be followed?

Speaker 3

So it's definitely better than it was, but we're still nowhere near where we need to be. You know, I think a lot of state DOT's are often saying the right things. Oh, we can't build our way out of congestion. And then at the exact same time they're trying to build their way out of congestion by any rains on the highways. So you know there's a disconnect there like and even in cities like, you know, the the better cities are doing. You know, protected bike lanes with the, you know, vertical flex posts. They look the part and we all sort of think they're better than before, but those are designed for car to go over at 70 miles an hour, and they're supposed to pop right back up. Right. We know it's not real protection and we're still not. To the point where we feel like we need to do that like we still think all our data comes back and tells us that, you know, the driver should have done better, that pedestrians should have used the crosswalk instead of jaywalk where they did. And we never step back and think, well, you know, maybe the nearest crosswalk was 1/2 mile away and we put crappy sidewalks in between. Where they were and where they're going, like. So to me, these things are our fault. So if we put the onus back in the traffic engineers to treat every crash as something that's solvable, yeah, I think it'll start changing what our streets are like.

Speaker 2

Let me take a moment to reintroduce you. We're speaking with Professor W Marshall. His book, killed by a traffic engineer, just the the title blew my mind, so I had to talk with shattering the delusion that science underlies our transportation system is out in Colorado, which is probably beautiful today. It's hotter than Haiti's. Here in Cleveland. Yeah, we got 93° today, which is like whoo so. You know my husband. Talks about things like being predictable. And where did I just see this? We were out of town over the week, over this past week, and I I noticed that I was trying to get the attention of somebody I was driving, but I was trying to get the attention of another driver. And so everybody stops, you know, nobody, nobody. Goes at all. And and this idea of being predictable about. Or or just. Taking turns doing the right thing. What about that? I mean, are people being taught correct?

Speaker 3

I mean, well, I think we can think of it a few different ways. I mean, husband's got a good point. Like when it comes to safety, being predictable, I mean as a road user, especially as a bicyclist, right, I think as a bicyclist, you definitely told that maybe at some point, I mean it's it's really important and I think we design the transportation system as if everyone sort of is predictable.

Speaker

Great.

Speaker 3

But it can be a double edged sword too, like if. You know it can lead to complacency in drivers, like when we start to have expectations that maybe there are no. Pedestrians in an area like when you think of a slip lane off a highway and like an urban area like sometimes you know you might have one pedestrian a week. So the drivers feel comfortable, like looking over their left shoulder and they're predicting in their head there's been no pedestrians there. And then when there is a pedestrian there and they get hit, we just sort of blame that driver. Or maybe blame the pedestrian, depending on what happened. Like. Yeah, it's so predictability. It's tricky. Like when you think of kids too, I like, we know kids meander like we know when I see kids on bikes. I've been watching some of these videos lately of like, the the bike buses. Like all the kids going to school together, right, watch how they're like, they're just. Kind of meandering their way back and forth, they're not going in a straight line, but we don't design any differently around the school like we tell people to slow down. But we could give longer times for pedestrians to walk across the street because we know kids are slower and they meander. We could make the bike lanes especially wide. Because we know kids have a hard time staying straight in the bike. Lane, we could. Put the stop bars back where the stop signs are, because we know cars are bigger and kids are little and you just can't see kids in the crosswalk from those big cars. You know, and bigger picture. When you think about the shared space type designs. Where we sort of mix all road users together. And it's completely unpredictable. But those end up being safer than a lot of the places that we. Try to rely on predictability. So when? You know the Hans Monderman. I don't know if he's like in some of his Dutch designs. Like we just take away the vertical separation. Pedestrians can sort of walk wherever they want, like in the bigger, faster road. Users have to watch out for the smaller, more vulnerable ones. And it ends up being safer. So that unpredictability can be used. As a design tool to increase safety in certain contexts. So that's a long answer, but there's a lot kind of going. On in that.

Speaker 2

Yeah, there is. Let's take a short break, and when we return, we'll speak with Wes some more. You're listening to the outspoken cyclists. We are back on the outspoken cyclist. I'm your host, Diane Jenks. We're speaking with Colorado University's professor W Marshall about his book, killed by a traffic engineer, shattering the delusion that science underlies our transportation system. Before the break, we were talking about predictability, and that brought me to a question about driverless cars.

Speaker

Let's talk this.

Speaker 2

Again, about autonomous cars, cars that drive themselves, I, you and I talked about this the last time when I screwed up the the recording, but I haven't stopped thinking about it. This idea of cars having reservations. So explain what you see is the fundamental

problem. With having all these autonomous cars and mixed in with pedestrians or cyclists.

Speaker 3

Well, I mean I I feel like it's easy for traffic engineers too. Like, if if education and enforcement. Aren't going to. Work technology is going to be the panacea, like if 94% of our fatalities are human error based. The idea is that autonomous cars are going to remove human error from the equation, and it's just not that simple. I mean, for a lot of. Reasons. I I think I might have told the story last time of when I was in Australia for sabbatical. Sydney had this thing called City Talk where they would bring in. Speakers from all over the world to talk about, you know, certain topics they had, this guy from MIT, I think his name is Carlo Ratti and he was showing these sort of amazing animations of the conventional intersection where cars are backing up, there's congestion, there's a lot of delay. And he had a simultaneous simultaneous. Animation of an autonomous intersection where every car was getting a reservation and they were just flying through this intersection like Crazy Cause they all knew where each other were. And he declared this the future of urbanism. And he got a standing ovation from like 200 people. And I'm just sitting there thinking what happens if there's one pedestrian or one bicyclist or one human driver, like none of that works whatsoever in. Like real life contacts and like, I guess, even trickier when you think. About it will. Even if we can get the technology right and we're still nowhere near that, you know the the most recent study I saw on that said like, yeah, it's safer except at dawn at dusk and. Whenever they turn. Which is like all the time, almost right, right. But at the same time, a lot of people, you know, there's a lot of people that would never drive, like a electric car or a Prius, you know, or something like that. Like, Can you imagine them? Driving an autonomous car like so it might end up being like the gun debate, like you're gonna pull the steering. Wheel. Out of my cold, dead hands and it becomes like a social cultural issue. As well, you know and then it gets trickier too. Like, do we design these autonomous vehicles to stop for pedestrians? Right. You would think they would. That makes perfect sense. But if that's the case, then I could walk out in the street like Moses parting the Red Sea and all of the autonomous vehicles will stop for me. And you're going to have high school kids. Buying cars is the car, but the alternative is what we designed them to run people over like we can't have that either, so I don't know. It's just not as simple as sort of people seem to think. And technology has always been this carrot that's always been five years ahead. For us, it's going to save the day, but it's been that way for 50-60 years and that carrot is still five years away and in five years it probably. Will be five years away, then.

Speaker 2

So yeah, the carrot and the stick, I get it. I I mean, I was fascinated by your your description of it last time. I was like, wait a minute. That makes such good sense. And yet we have all these people saying, Oh yes, it's going to be a driverless car world. It's

going to be Flintstones or whatever. Jetsons, Jetsons, it's the Jetsons, right. Yeah, yeah. Yes.

Speaker 3

I I think it's in the book, but I mean, during the pandemic, remember my kids? We watched the Jetsons a little. Bit. In the first episode, George Jetson is flying to work, and he's stuck in traffic.

Speaker 2

Which is, what else could they ever imagined then? I mean that I don't even know how old that is, but yeah, of course. Of course. That's a second about what happened in the 50s when they began to bisect cities with these major highways, and now they're taking them down.

Speaker

Yep.

Speaker 2

What finally changed people? 'S minds. You know they they killed so many businesses and they divided so many cities, and now they're saying, wait a minute. These don't work.

Speaker 3

I think the things we were promised have never come to fruition like. You know I when I show when I talk about this issue in my class, I do a sustainable transportation class and I have one week where we talk about these urban highways and you know, I show, you know, one of the memorandums from Eisenhower saying that. Basically what's happening. I don't want these highways coming through the cities just to stop at the edge and like he was told that ship has sailed. They're going through the cities. This will solve congestion this. Will solve. Safety and none of those things have come to fruition, so it.

Speaker 2

Think.

Speaker 3

I mean people. Became disillusioned, disenfranchised, pretty quickly, and in that class I show some images of Detroit, MI in the early 1900s I showed some images of East Berlin, Germany from the early 1900s, and they're pretty stark difference like this communist society versus what was a bustling metropolis. Detroit and then I show pictures. You know from like more recently and Berlin is this thriving metropolis now and? Detroit, you know, there it doesn't look like that. I mean, it's very different. There's a lot of empty lots like it's empty and I kind of ask the students like, if I showed you

these before and after pictures and I asked you who won the war, what would you say? And like you would clearly say, Germany won the war, but that's not what happened like, so we.

Speaker

We.

Speaker 3

Like the more we did to our cities like this, the worse off they became the ones that we left alone are often the ones that are better off now. And that's the case with a lot of, I mean, not just the highways, but even like the big urban arterials like those are the most engineered facilities. You know, St. level facilities and most cities. But that's also where high injury networks. Are it's the streets that were built before traffic engineers existed.

Speaker 2

Right.

Speaker 3

That are illegal. To build now those are the safe ones.

Speaker 2

So what do you see as? As a reasonable future, let's let's take it out five years and then maybe 10 years. Do you see and? And of course it's going to be different community to community, but do you see maybe a an overall look in the United States especially I mean that's what we're talking about, we could go overseas and see places like Copenhagen and. Amsterdam and I don't see the. Right here I I just don't see that unless it's city by city. You're not going to be able to to do that, but places like New York were able to shut down roads that New York City that nobody ever thought they'd take traffic off. So tell me what? Tell me what you think is going to happen. Based on first of all, all these infrastructure dollars that are being distributed and. Because of the 40 some odd 1000 people who are killed every year. Are we going to see?

Speaker 3

Change I mean I hope so. I mean, I I know money is always a big issue and especially when we're talking about bike facilities or sidewalks, we never have enough money to fix those things. But we always have enough money for new highway interchange. Or to expand like I-70 here in Denver, right. We can find billions of dollars. Pretty easily when those things come up, so we need to have a rethinking and reallocation of the funds. I mean, I would love. To see cities that just have good data on, like their sidewalks and bike infrastructure like most cities don't even know what their sidewalks are. And even if they do, they don't know. If they're in decent shape, they don't know if they're one foot wide, 2 feet wide, 66 feet wide. They don't know. You know, if there's fire hydrants in the way so nobody could possibly use a wheelchair or a stroller on them, like,

fundamentally, that's where we need to start it. Like instead of putting money into autonomous vehicles and hyperloops, like, start with the sidewalks, start with the. Like facility start with the crosswalks, have an understanding of where they are, like when you look at Hoboken, they get a lot of. Attention now for. Vision zero. They haven't had a death in. I think five years, right?

Speaker 2

Knock wood.

Speaker 3

And what people are attributing to is often the day lighting of the intersections where they pulled things back. But if you go a little bit further back in time, they did an amazing job of just documenting where the sidewalks were. That's where they started. So I mean, I feel like that's would be a great place for cities to start. Like what can we do, start there and then I would start focusing on. You know, like a broader category, like kids like, don't just play whack a mole with the most dangerous intersections. Look at the schools and the parks. Where do kids live, where kids are going and start making those things as safe as you can.

Speaker 2

Well, and I. Think. There's a professor at UVA who is who's done some studies and said that. He's finding that as high as 50% of parents are not teaching their children to ride a bike, and that's kind of scary to me, especially being in the bike business. But I think just in general, the kids aren't going outdoors and doing the things they need to do. And so does that add or subtract to the thinking about being safer?

Speaker 3

I've heard medical doctors say the same thing, like we know walking, biking can be good for your health, but they don't recommend it to their patients because of the road safety danger and because of like the air quality risk. And in a lot of places people are living. It's kind of. True. Like, they're not wrong that. It's probably more dangerous to be out there on a bike than it would be in in a car, but we, you know, for, I would say we need to start building more places where, you know, driving is not your only option. I mean is it 30% of the population doesn't drive or can't drive, but we're designing our cities around the assumption that everyone drives and when we spread our land uses. Like we do. You know, I think most people are in situations we're driving and honestly, we're driving in a big SUV is actually the most rational decision. Like, given the community and the transportation system we put in front of them.

Speaker 2

How terrifying is it? I find it terrifying.

Speaker 3

Well, it is terrifying. I.

Speaker

Hey.

Speaker 3

Mean. You know, these hockey players story, I that one's getting attention nationally because of there are no person. But this happens almost every day in every part of the country, right?

Speaker 2

Yeah, you do not have. Many Hoboken in this. Country you know, and vision 0 is is a pie in the sky thing for a lot of communities that adopt it because they can't back it up with infrastructure. Yeah, that works. Yeah. So wrap it up for me. What else do you want people to know about your book? And I want to tell people that it is written so that anybody can understand what you're saying. It is not. A text book per say, so you do not need a a professor to take you through it. It's fascinating and and the chapters aren't real long and you back everything up. It's just a wonderfully, wonderfully written book. I I really enjoy. I pick it up and I just like find a chapter and and and read it. You have something called the three's for example. And I knew what they were right away without even thinking about it. Engineering, education and now I'm. Going to forget the third.

Speaker 3

One and enforcement enforcement. OK, let's do that real.

Speaker 2

Quick not wrap it up with the threes.

Speaker 3

Well, thank you for all the kind words. I mean I I think when you're first asking like. But. You know one thing I want people to take away is that our transportation system doesn't. Have to be this way. Yeah. We can create safer, more equitable, more sustainable streets and but it starts with questioning the status quo and being open to change. But right now, the status quo has put us in a place where we're trying to rely on educating. Road users to do better and enforcing the rules with the police. And like with enforcement, you know, whenever we do that, whenever the city declares Vision Zero was funny, like they start by ramping up in force and they start by often sighting bicyclists.

Speaker 2

Right. Yeah, giving tickets to bicycles. That's exactly.

Speaker 3

Right. Yeah. And I remember in New York City that this was probably 2018 or 19. You know, they did something similar, ramped up enforcement and I think they gave 41 tickets to bicyclists. They gave 1 to a truck driver. In the same time frame.

Speaker 2

Something like that. I remember that.

Speaker 3

And like the numbers of people killed by truck drivers versus bicyclists, were the inverse right? It's totally flipped. But we're not focusing on the right thing, so. You know, I think we gotta start there like this. Stop trying to rely on those things. Like, yes, technology, maybe in terms of red light cameras or speed cameras can help, but we can do so much better. Like we can start rethinking how we design our streets. And, you know, in the book and trying to challenge the theories we've always taken for granted because. Every step counts towards making safer communities. And to me, I'm just thankful that people like you were interested in this book of mine because I think that's where we need to spark change. Like we need people giving a traffic and just a hard time for just following the old guidelines and standards like they always have.

Speaker 2

So if somebody listening and I know I have a lot of listeners who love this topic, just are are fascinated as I am, by urbanism and and transportation solutions. What would you say to somebody, a young person who's looking to get into this field? How would you not convince them but sort of give them the, you know, the the Cliff notes on what's exciting about this field that's changed?

Speaker 3

I mean it. It's so there's so much changing. Like when I got into this like 20 years ago, like a lot of stuff you see in the streets now would have been a moon shot back then. Like, a lot of the topics that and the changes that you see, I remember one our PhD students when he got here, like he wanted to do some research on the cities that get a Olympics or World Cup to see how they can do better or worse on that. Like it turned out, some other research he did some amazing papers that were exactly what he was thinking. But by then, Uber and. Lift were there, like they weren't there at the beginning, you know? And those companies were not great at sharing data. So my student, Alejandro, he drove for them. We surveyed people. We asked people questions. We figured out how much driving he was doing, how much driving he was doing with. No passengers in it. And all of a sudden we have this amazing research that shows that like, we're actually adding about 70 or 80% more vehicle miles traveled to the system than if these services didn't exist. Because a lot of people would have walked her bike, he's dead heading a lot. He has no passengers going from place to place and like that resource would not have been possible. Then transportation is like that. Everything is changing all the time and that's what makes it so interesting to. Me. The other thing I'd

say is you don't. You know, a lot of people would have a hard time imagining themselves as an engineer, but thinking back to your first question today was about. How you know what an engineer is? And I said one of the things you might be doing is. Going. To community meeting, right, you don't need to know calculus to do that and be good at that. So we need more people coming to this field that could never picture themselves as an engineer like we need people coming at it and maybe not even with the civil engineering. Background like we have a program where you can get your masters of engineering. With not a ton of prereqs, so you know one of my former students, she came to us from South Carolina is every other engineering school was asking her to take like 20 prereqs and she had to take them here. But it was more like 4 or five and she ended up being one of my best students, even though she had a biology undergraduate degree like a minor in French literature. But. You know, someone like her might never think they could become an engineer, but I'm trying to let people know that you can, and we need you. Like we really do.

Speaker 2

How big is your program?

Speaker 3

UM, yeah, we probably have. Maybe 20 graduate students sort of in transportation at various points. Our our campus here, like in downtown Denver, I think. We. Have 40,000 people come to this campus every day, so it's a. Big school, we. Have three actually university sort of on this one campus and you see right behind me. This is like Larimer Square in downtown Denver is right here. So we're in the mix of of urbanism. We're in the mix of a lot of great changes. So for me like. What you see right behind me is my laboratory. Really. I don't need a lab on campus. Like I can just go out and empirically measure things like speeds and the changes to our streets. And Denver has been great. Like when I first got here, they're doing a ton of new transit, a lot of new light rail commuter lines. And now, like the new bike facilities. Like I said before, a lot of the stuff I see today would have been a moon shot 10 years ago, but it's right out there behind me now and we can study this stuff.

Speaker 2

And are you seeing statistical changes so that fewer people are being hit, fewer people are being injured?

Speaker 3

It depends. Like it it's like we're doing good in some places less good than other. I mean, if you look at the data on vision 0 cities, a lot of them have not made much impact like we're actually going the wrong way. And you know, part of what I attribute that to is that we're not really doing business here like business 0 is really a moral shift. And like, if we really wanted to do business zero, we would just not let anyone drive over 20 miles an hour in the city. But we're not willing to do that. So we're. You know,

kind of doing a lot. Of. Business as usual. Type things under the umbrella of Vision 0, so it's hard to say. Vision 0 is a failure because I would argue we. Haven't really done it in most places.

Speaker 2

Right lip service. Paying lip service to it. Well, I I know you need to get back to what you're doing. I we could talk about this all day. We've been speaking with Professor W Marshall. He is out in Colorado. He wrote a book called Killed by a traffic engineer, shattering the delusion that science underlies our transportation system. Is there a place where people who are interested?

Speaker

Yeah, yeah, yeah.

Speaker 2

To follow your work.

Speaker 3

That's a good question.

Speaker 2

Besides buying your book, which we will recommend.

Speaker 3

Yes, the book's a good place to start. I mean it is. Google Scholar has a thing that keeps track of all my research papers for me, so I have like 7580 like peer reviewed published papers that all came before this book on a lot of these topics. So. You know when. A lot of advocates come to me and they sort of ask like, oh, here's what. The. Engineer is telling me, like, are they right? Can I fight back and I will point them to one of my studies like, well, you know, there there's some leeway here. They're. Not. Really. You know, they have more engineering judgment than they're leading you to believe, and here's what you can show them. So I will kind of point out one of those papers. People go that way. There is a Twitter account that sort of just collects. A friend of mine put it. Together that it's just showing. You know, some of the news articles are like the podcast like this, that that I've been on and people are talking about the book. So that's another thing. So if you looked up killed by a traffic engineer on Twitter or. Ex. Or whatever people. Call it now there's more links like this there.

Speaker 2

Somebody this morning on a on a news show here, local news show called the Twixt. I thought that was pretty interesting instead of Twitter. Fixed. Well, thank you so much for talking with me. I really enjoyed it and I I look forward to seeing more success come out

of this book because I think anybody who's interested and wants to join his or her local advocacy group should have a copy of this book on hand.

Speaker 3

Yeah. And I think we all have a role to play in this, like I'm doing one thing. If I'm out there advocating that to value my research so like I can do research and help people. Do their job right.

Speaker 2

Exactly. And we can all contribute. Thanks so much, Russ. Have a great school year and I hope we get to talk again.

Speaker 3

Thank you. This was fun.

Speaker

Alright.

Speaker 2

My thanks to Professor W Marshall for an enlightening conversation I do highly recommend his book killed by a traffic engineer, and as he mentioned, you can read some of his peer reviewed papers by searching Google Scholar for a plethora of interesting topics, including why higher numbers of cyclists. Translate into safer cities. We also have a link to the book and the Google Scholar page on our website, outspokencyclist.com. It's been a rough couple of weeks in our bicycle world with the high profile deaths of the Goudreau brothers, I cannot imagine the pain and sorrow that their families are feeling, and from the outpouring of support and tributes so many others have been affected too, the time for a change in the way we think about traffic. Safety, urban planning and transportation, and most importantly, the mindset that says it's OK to drive a car regardless of your sobriety, anger, or distractions, is not. Now, if you are not already involved in some form of advocacy, perhaps now is the time to join a local organization. Sit in on a City Council meeting, or maybe even take your already expertise to local schools. Remember that this and all episodes of the outspoken cyclist are available on our website, outspokencyclist.com. There you'll find links, photos and a written transcript of the show. You can subscribe to our podcast on any of your favorite podcast apps. Follow us on Instagram, Facebook, Twitter, LinkedIn and now you can find us on YouTube. Thank you for listening. We'll be back soon with our conversation about the Connecticut portion of the East Coast Greenway. I promise. Have a great day. Stay safe. Stay well and remember there is always time for a ride. Bye bye.

Speaker

And.

Speaker 1

Thanks for joining us today on the outspoken cyclist with Diane Jenks. Who welcome your thoughts and contributions on our Facebook page or visit outspokencyclist.com to leave a comment on any episode. We'll be back next week with new guests, topics, conversations and news in the world of cycling. Subscribe to the show on your favorite podcast app and you'll never miss an episode. The outspoken cyclist is a copyrighted production of DBL promotions with the assistance of WJC U FM Cleveland, a service of John Carroll University. Thanks again for listening. Ride safely, and we'll see you next week.