

Investigative Report by Larry Bradshaw

Grave New World?

How Dryyver's Culture Kills



Accidents happen. However, the incident that took Maria Chavez's life yesterday was no accident. It was the predictable outcome of a corporate culture that emphasizes competition and speed-to-market over collaboration and thoughtful entry into the unknown. In an exclusive interview with NeonTech, Beverly Lee, an engineer on Dryyver's Coordinated Autonomous Vehicle (CAV) team, provided a clear view into the cultural dynamics that put Dryyver and Ms. Chavez on an inevitable collision course.

For Lee, a lifelong dream of working in a world-changing startup was realized when she joined Dryyver in 2011. By 2016, it had turned into a nightmare. Her beloved startup had become a bloated corporation. Even worse, its cultural norms had shifted from visionary optimism to narrow-minded cynicism.

"In the early days," Lee recalled, "there was time and space for researchers, engineers, and other team members to explore new and exciting ideas. Collaboration and creativity were encouraged, even required. We worked hard and almost around the clock, but we loved it because we were all there for the same reason: to change the world! We believed in what we were doing, and we believed we were doing it responsibly."

Lee explained that work hours and locations were more flexible then, because everyone was trusted and driven by the same vision. She credits Dryvver's strong and positive culture of the early 2010s for its groundbreaking innovations like "Vinci," the advanced predictive technology that she says differentiates its ride-sharing app from competitors.

"Most importantly," said Lee, "we took the time to debate contentious issues -- philosophical, ethical, human -- related to our technology. Everything we were creating was new in the world, so we had to think carefully about the implications of its rapidly expanding role in people's everyday lives. Most of our customers don't think about it this way, but our products give machines more and more power to make decisions on their behalf. Some of these decisions can be extremely consequential, even life or death. We had to think carefully about what we were doing."

With the company's growth came change. As Dryvver became more focused on its self-imposed timeline for launching the world's first self-driving taxis, the work environment and people changed.

"The place became almost unrecognizable," said Lee. "In a matter of months, all the collaboration, all the enthusiasm, all the free inquiry dissipated. It was replaced with a single-minded focus on completing the task."

As the pressure mounted, Lee admits that some corners may have been cut at times. Overall, though, the quality of work wasn't the problem.

"Look, we have extremely talented and wicked smart people. When we know what we need to achieve, we achieve it as well or better than anyone else in the world. We found ourselves in this new situation, working side-by-side instead of together. Of course, we had some working groups, but many of us were advancing our piece of the work independently just to keep pace. That was a bummer, but I stand by the product and I think anyone else in the company would say the same."

What was lost was openness to feedback, debate, and the willingness of individuals across the company to express alternative points of view. These were mainstays in the old Dryvver, but casualties in the new. On one key issue, Lee found herself increasingly isolated.

"In the CAV team, we knew that our technology was going to change the world for the better," said Lee. She explained that Dryvver's autonomous vehicle operating system connects all of the company's self-driving vehicles on a single network and enables them to learn from each other's experiences. The implication is that they learn at an exponential rate and pretty quickly become far more skilled drivers than any human being.

"If a human driver experiences a discrete anomaly in a given day -- let's say a pedestrian unexpectedly runs into the middle of the road -- the driver reacts based on his limited perception of the environment and in ways that are shaped by the handful of times he has seen a similar anomaly in his life. Our taxis have hundreds of sensors and perceive much more of the environment, a tremendous advantage over a human driver. Even better, the operating system will have seen that exact same anomaly hundreds, thousands, eventually hundreds of thousands of times. Imagine how much better our taxis will react! As more of these vehicles hit the road, imagine the impact on things as small as traffic congestions and as large as fatal accidents!"

However, there's one major catch.

"Even with the skill Dryvver taxis will acquire over time, they will still inevitably end up in situations where an accident is unavoidable. There are just too many dynamic factors in the real world. In these situations, a taxi may

have to choose between colliding with one vehicle or another, or worse colliding with a pedestrian or bicyclist. It can quickly assess its options and calculate probabilities of injury or death associated with each. It can even access basic rules, if we write them, about protecting certain kinds of people -- women and children, for example -- over others. However, it will have to choose ... and in an instant. In some cases it will have to choose between putting one person at high risk of death over another. Never before have human beings put machines in a position to make that kind of a decision."

On multiple occasions, Lee sounded alarm bells. She attempted to slow her company down, proposing to invite academic, religious, and political leaders to the company to discuss this and related issues. As a lead artificial intelligence researcher on the team, she hoped to host robust dialogues and work toward a clear set of rules and principles that went beyond protecting the vehicle's passenger.

This kind of dialogue would have required Dryyver to pump the breaks. The old Dryyver would have, but the new Dryyver didn't.

"I'm just really sad today ... especially for the Chavez family," said Lee. "I fear Taxi #15 might have had a choice. I fear Taxi #15 made a choice. I can't imagine another way this could have happened."