Fear, Resistance, or Anticipation? Older Truck Drivers' Reactions to the Adoption of Automated Vehicles

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INTRODUCTION

- The forecasted adoption of autonomous vehicles (AVs) will lead to major changes to the job of truck driving.
- These changes may be particularly challenging for drivers, as the population of truck drivers skews much older than that of other occupations.
- Our goal was to understand truck drivers' attitudes towards AVs and the longevity of their job.

METHODS

- N = 54, (*M* driver age=41.14 years, *SD*=12.26)
- *Data Collection:* Focus groups with truck drivers (N=20), supervisors (N=12), and upper-level managers (N=25) of trucking companies
- *Data Analysis*: Data was initially coded based on codes developed from the literature, research questions, interview guide, and analysis of three transcripts. Themes were then developed and refined consistent with the original data set and research questions.

FINANCIAL DISCLOSURE

The Unknown

"I don't see them [AVs] working too well with the delivery aspect of it because you're going into different cities, different towns…backing around buildings, blind side backing. And a lot of these places I go to now are set up for box trucks or old school trucks, not a 53-foot trailer…"   - A 50-year-old, female truck driver

"There are other drivers who, they're in their 50's, 60's, 70's, and they've been doing this since they were 18 or 19 years old. They don't know anything else. And the idea of a computer coming and doing their job and potentially better than they could is a scary thing because now they don't have a job."   - A 30-year-old, male truck driver

Adaptability and Desire to Adapt

"… there's a lot of older drivers that would not appreciate the truck telling them what to do in a sense, especially when they are on icy roads or windy mountains…I think the farther they go in this, the more they're going to kind of turn away the real experienced drivers that we have out there."   – A 57-year-old, male truck driver

"With my newer truck that I drive, it's a freightliner so you got the navigation. I got the adaptive cruise control. And there's times when I could pick up the reflection off of one of those barrels …there's nothing in front of me. It's just the overpass it's picking up the reflection."   - A 65-year-old, male truck driver

FINDINGS

The Unknown:

- Drivers are concerned with the uncertainty of how their jobs may be affected by AVs.
- Truck drivers, managers, and supervisors do not think the driving position will ever be **fully** replaced by AVs due to 1) unexpected issues a driver will need to fix, 2) various terrains and materials transported, and 3) performing manual day-to-day functions.
- Drivers still shared an underlying fear of being displaced. Drivers, managers, and supervisors acknowledged there may be a decrease in the need for the driving position and expertise with each increase in level of automation.

Adaptability and Desire to Adapt:

- Driver expertise is vital to safely operate the trucks.
- Drivers, managers, and supervisors expressed that an ongoing challenge for drivers as levels of automation increase in trucks will be adapting to the truck being in control.
- Older drivers have been resistant to technology changes in the truck but have accepted specific technologies after using them or being forced to use them due to regulation changes.
- Technology is not always helpful to the drivers when it alerts them to something that isn't an issue.

DISCUSSION

- Companies will need to design trainings for drivers not only to learn to use new technology, but also to promote openness to and acceptance of automation.
- Companies could potentially assuage driver concerns and increase commitment by pledging to support reskilling programs.
- Further research is needed to understand the efficacy of trainings and identify organizational features that promote technology acceptance, as well as the extent to which ageism may limit opportunities to retrain and continue offered to older drivers.