SOCIAL FACTORS RELATED TO AUTOMATED VEHICLES

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TRUST IN THE AUTONOMOUS VEHICLE (AV)

- Consumer distrust of the technology
- Not being in control
- Apprehension from mishaps
FEAR OF THE AV

- AAA survey
  - 78% afraid to ride in an AV
- AIG survey
  - 41% don’t want to share road with AVs
- MIT and JD Powers and Assoc. studies
  - Public becoming less trusting over the last two years
CONSUMER DISTRUST

- Hypothesis: Familiarity will ease anxiety
- Choreographed rides: 180 degree change in attitude
- Voice
- Humanizing the AV
- Want the car to “hear”
- Hand gesture recognition
VISUALS

- Riders like to see what the car sees
- Understanding why the vehicle does what it does is important
CONTROL

- Want the car to do what they would do
- Machine learning of preferred driving styles
- System learns what the rider wants
- The car adapts to the person
- Algorithm aversion
ANXIETY OF THOSE OUTSIDE THE AV

- Pedestrians and people in non-AVs
- Can the AV “see” me?
- Light bar patterns
- Standards of communication very important!
ETHICAL DILEMMAS

- “Trolley” Problem
- AVs: Save the most lives
- Own cars: Passenger safety first
OTHER CONCERNS

- Hacking
  - Vehicle control and data privacy

- Safety
  - Examples of AV accidents
UNREALISTIC EXPECTATIONS

- Driver still needs to pay attention
- Overestimation of autonomy
- Clearly communicate strengths and weaknesses
- Calibrated trust
- It’s not magic!!!!!
EMBRACING THE AV

- Trust in the technology
- Confidence in its use
- Convergence of societal and environmental pressures
THANK YOU

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