



HumanFIRST

Exploring Gender Differences in the Perception of Levels of Automation and Comfort with Autonomous Vehicles











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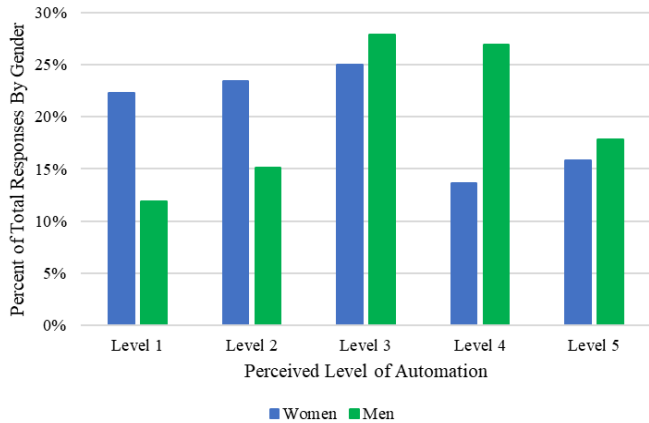
- Trust and adoption of automated vehicles (AVs) (Choi & Ji, 2015; Lee & Kolodge, 2020)
 - Those with positive attitudes and willingness to adopt AVs live in densely populated areas, are younger, highly educated, and male (Lee et al., 2020; Rahimi et al., 2020; Hohenberger et al., 2016)
 - Gender and geographic differences due to safety, affective reactions and perceived benefits (Pyrialakou et al., 2020; Hudson et al., 2019)
- **Do individual differences in the perception of automation influence comfort with AVs?**

**$N = 403$ (45.7% women)
Age_M = 41.36 (SD = 16.10)**

“Take a moment to imagine an automated vehicle”

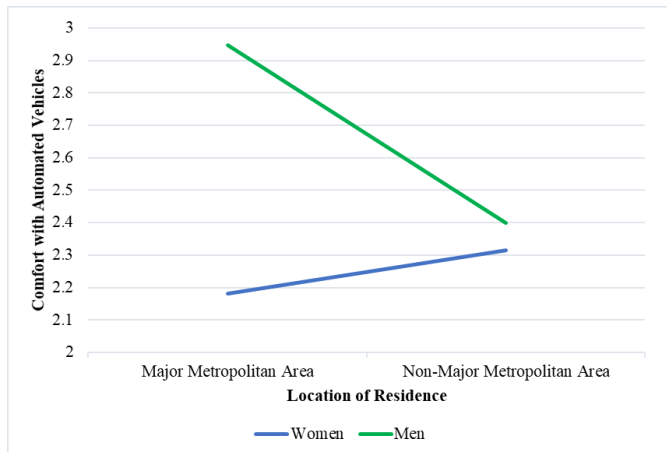
LEVELS OF AUTOMATION				
1	2	3	4	5
Driver Assistance	Partial	Conditional	High	Full
 Feet-Off	 +Hands-Off	 +Eyes-Off	 +Attention-Off	 Driverless
Who Has Responsibility?				
 Driver	 Driver	 Vehicle with Human Backup	 Vehicle	 Vehicle
Examples				
Adaptive Cruise Control	Steering Assistance	Traffic Jam Pilot	Robo-Taxi in Geofenced Area	None yet

Rate comfort with automated vehicles



Differences for gender and perceptions of levels of automation $\chi^2(4) = 19.27, p < .001$

Women less comfortable ($M = 1.76, SD = .87$) than men ($M = 2.59, SD = 1.50$) for SAE Level 5, $t(66) = -.83, p = .01$



Women living in major metropolitan areas less comfortable with AVs compared to men in major metropolitan areas, $t(161) = -4.14, p < .001$

- Variation in the types of exposure women and men receive as a group to automated vehicle technologies, leading to different conceptualizations of AVs overall
- Role of trip complexity and influence on comfort
- More inclusive education, outreach and demonstration of currently available automated technology is needed to reach a diverse user population