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Post-Drive Questionnaire

The following questions ask about your understanding of a driving automation system, your trust in automation, and risk-taking behavior. Please read each question carefully. If something is unclear, ask the researcher for help. Your participation is voluntary, and you may skip any questions that you do not wish to answer.

Mental Model Assessment

The following questions will ask you about a driving automation system you might experience today. For each question, please indicate whether the statement is “True” or “False”, then rate your confidence in your response (No Confidence, Slight Confidence, Moderate Confidence, High Confidence).

1. While the system is active/engaged, the driver needs to monitor surroundings in case they need to take over control of the vehicle
2. The system will monitor the driving conditions and will notify the driver when they need to resume control
3. When active/engaged, the system is completely self-driving and requires no monitoring by the driver
4. The system will alert you when you are looking away from the road for too long
5. The system will deactivate when you come to a complete stop
6. The system can handle gentle corners
7. Inclement weather may impede the system's ability to identify objects and road markings
8. The system can assist you while you enter or exit the interstate
9. The system will work on roads without lines or markings
10. The system will be deactivated if it no longer senses a vehicle ahead
11. You may read a book while the system is active/engaged
12. The system can be deactivated at any time
13. The system automatically suspends itself when the vehicle exceeds a certain speed

14. The system will be automatically suspended when the windshield wipers are set to high
15. Pressing the brake or the accelerator will deactivate the system
16. The system responds to pedestrians walking on the sidewalk
17. The system provides both steering and braking to avoid a pedestrian
18. The system may not detect a pedestrian who suddenly crosses in front of you
19. Dark conditions may reduce the system's ability to respond to pedestrians
20. The system will warn you when you enter an area with heavy congestion
21. The system may react to traffic lights and/or signs
22. The system will provide steering input to keep the vehicle in its lane
23. The system can drive in a work zone where lanes have shifted from their usual location
24. The system will change lanes to pass a slower moving vehicle ahead
25. Maintains the speed that you have set when there are no vehicles detected in the lane ahead
26. Will accelerate if a slower vehicle ahead moves out of the detection zone
27. Is meant to be used on highways and interstates
28. May not correctly detect stopped vehicles in your lane
29. Reacts to stationary objects on the road (construction cone, tire, ball)
30. Is meant to be used in slow and heavy traffic
31. Will react immediately to vehicles merging onto the road in front of you
32. Reacts to oncoming traffic
33. Adjusts the vehicle speed when approaching tight curves
34. Works even when the radar sensor is dirty

Trust Scale

Below is a list of statements for evaluating trust between people and automation. There are several scales for you to rate the intensity of your feeling of trust, or your impression of the system while operating a machine. Please select the value (1 - *Not at all* through 7 - *Extremely*) that best describes your feeling or your impression.

Scale: (*Not at all*) 1-2-3-4-5-6-7 (*Extremely*)

Define the system to which they were randomly assigned.

1. The [condition]system is deceptive
2. The system behaves in an underhanded manner
3. I am suspicious of the system's intent, action, or outputs
4. I am wary of the system
5. The system's actions will have a harmful or injurious outcome
6. I am confident in the system
7. The system provides security
8. The system has integrity
9. The system is dependable

10. The system is reliable
11. I can trust the system
12. I am familiar with the system

Driving Questionnaire

Please select the value (1 - *Never* through 7 - *Almost all the time*) that best describes you.

Scale: (*Never*) 1-2-3-4-5-6-7 (*Almost all the time*)

In the past month, how often did you:

1. Drive fast just for the thrill of it
2. Deliberately disregard the speed limits late at night or very early in the morning
3. Speed up if someone is trying to pass
4. Take some risks when driving because it makes driving more fun
5. Turn right on to a main road into the path of an oncoming vehicle that you had not seen, or whose speed you had misjudged
6. Fail to notice, because lost in thought or distracted, someone waiting at a crosswalk
7. Misjudge the speed of a moving vehicle when overtaking
8. Honk your horn or flash your lights in anger at other drivers
9. Forget where you left your car in a multi-level car park
10. Get into the wrong lane at a roundabout or approaching a road junction
11. Ride in a vehicle driven by someone who has had too much alcohol
12. Fail to read the signs correctly, and exiting from a roundabout on the wrong road
13. Follow very close behind slower drivers
14. Take off on a trip with no pre-planned route or schedule
15. Drive while talking on the phone
16. Drive while texting
17. Driving with a blood alcohol level just over the legal limit
18. Driving while drowsy
19. Driving 10+ mph over the speed limit
20. Driving 20+ mph over the speed limit
21. Driving after a few drinks
22. Driving after smoking marijuana