

## Description of naturalistic driving study

The current study lends data from a naturalistic driving study, where the aim was to explore how drivers familiarize with new technologies, and explore effects of screen use on visual attention and cognitive load.

- Eight regular drivers were recruited to participate in a naturalistic driving study on a closed driving course.
- The naturalistic driving experiment was carried out in August 2023.
- Participants completed two driving sessions; one in their own car (or a borrowed, older car without ADAS or integrated screen (VW Polo, 2010) and one in an unfamiliar, new car equipped with advanced ADAS functions (Adaptive cruise control, Lane Assist) and touch screen interface (They were either assigned a Polestar 2, 2022 model, or a Skoda Octavia 2021 model).
- Participants were asked in advance if they had prior experience with driving the car they were assigned.
- Half of the participants started in the unfamiliar, new car, while the other half started in their own car (or the borrowed older car).
- Half of the participants were assigned to the Polestar 2, while the other half was assigned to the Skoda Octavia.

The present study is concentrated on a specific driving task participants were given in the driving session with the unfamiliar, new car. Before the driving session commenced, each participant were instructed to imagine that they had rented the car and was going for a drive. They were instructed to make the preparations they thought were necessary to safely drive the car, while describing the steps. Two researchers were present in the car, one took notes, while the second researcher facilitated the conversation, ensuring rich descriptions.

After participating in the driving task, participants were interviewed once more. The interview lasted between 15-22 minutes. In the interview, we asked participants about whether they have ADAS -technology in their current car, and their experiences and habits related to use of ADAS-technologies. The interview guide used is presented in the text below.

## Mini interview After Driving on Nesodden test track

Date:	Interviewer
Time:	Participant nr:

### Background information:

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- 1) Age
- 2) Sex
- 3) Do you own a car? (If yes: car model, year)
- 4) Does your car have driving assistance systems? (If yes, what systems?)
- 5) How often/frequent do you drive a car (as driver)
  - a. 1= 5-7 times a week
  - b. 2= 3-4 times a week
  - c. 3= 1-2 times a week
  - d. 4= 1-3 times a month
  - e. 5= Less frequent
  - f. 6= Never
- 6) For how long have you had your driver's license?
- 7) *If applicable: How long have you driven a car with an integrated screen in the vehicle?*
- 8) a. If you have, how often do you use driver assistance systems in your own car (Adaptive cruise control, Lane keeping assist, and possibly Autopilot function)? (open-ended question is better)
  - g. *If 6a indicates that driver assistance systems are used: In which situations?*

### Open questions:

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- 1) How did you experience the tasks? Were there any you found particularly
  - Unfamiliar new car:
  
  - Own car (alternatively borrowed, older car):

2) **How did you experience the screen's user interface (layout, how easy it was to understand the organization of the screen's functions and find the right functions)?**

- Unfamiliar new car:

*If participants' own car also has a screen, ask the question for that as well. If participants' own car does not have a screen, ask: How did you experience your own car's (or borrowed) functions during these tasks (for example, placement)?*

- Own car (alternatively borrowed, older car):

3) **Can you comment on your experience of the differences between the two cars you have now driven, in terms of performing the tasks you were given along the way?**

4) **Have you experienced uncomfortable situations in traffic related to using the car's screen? [Note down the number of times and get a description of the situation(s)]**